

ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
OF THE
PROVINCE OF ALBERTA
FOR THE YEAR
1928

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY

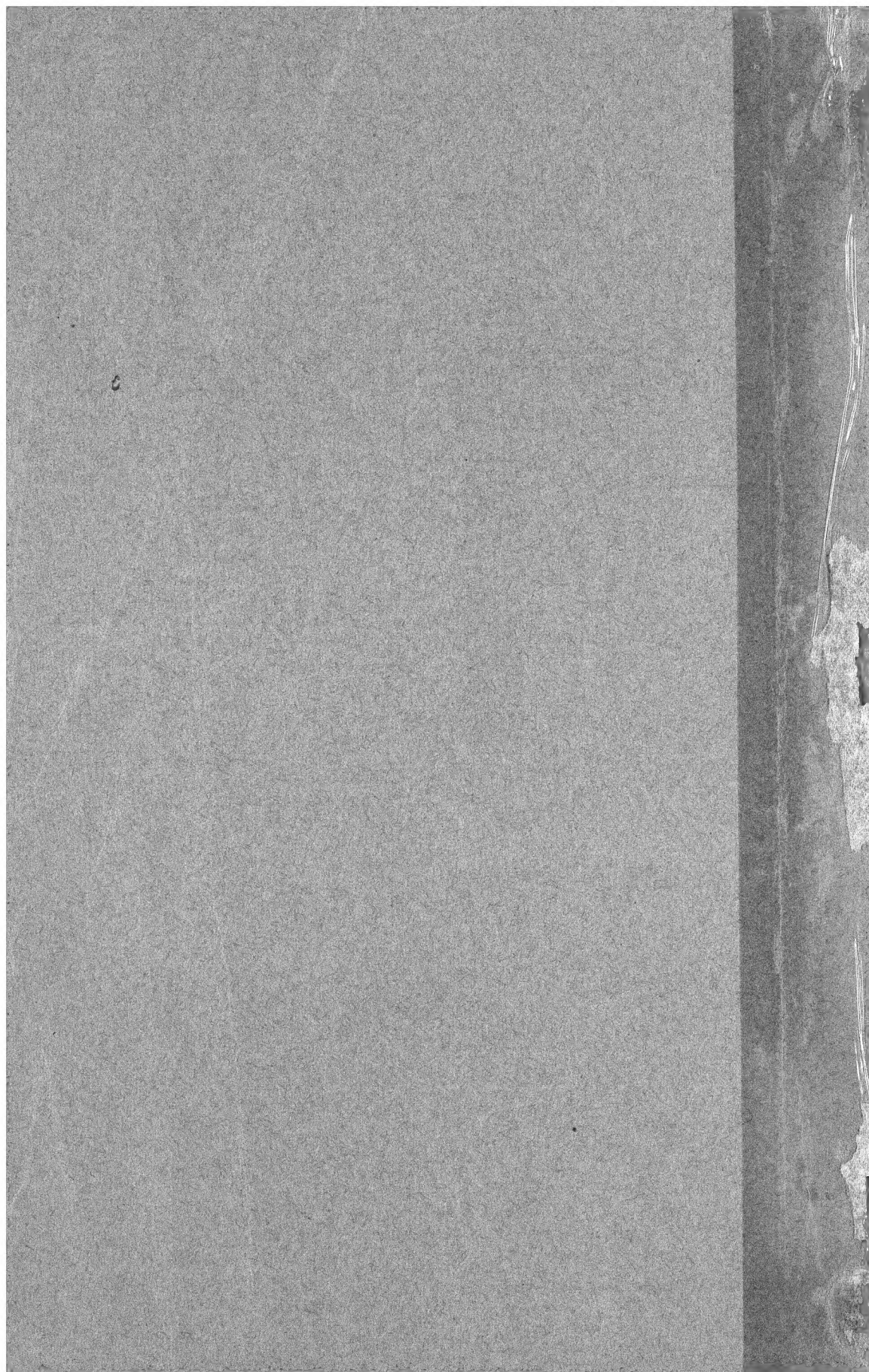


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DEPARTMENT OF AGRICULTURE, EDMONTON.

TO HIS HONOUR

WILLIAM EGBERT,

Lieutenant Governor of the Province of Alberta.

SIR,—

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1928.

I have the honour to be, Sir,

Your obedient servant,

GEORGE HOADLEY,

Minister of Agriculture.

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DEPARTMENT OF AGRICULTURE

Hon. George Hoadley, Minister of Agriculture.

1928

Heads of Branches

H. A. Craig, Deputy Minister and Superintendent of Schools of Agriculture.

P. W. Johnson, Secretary to the Department.

S. G. Carlyle, Live Stock Commissioner, Brand Recorder and Superintendent of Fairs and Institutes.

C. P. Marker, Dairy Commissioner.

P. R. Talbot, V.S., Provincial Veterinarian.

W. J. Stephen, Field Crops Commissioner.

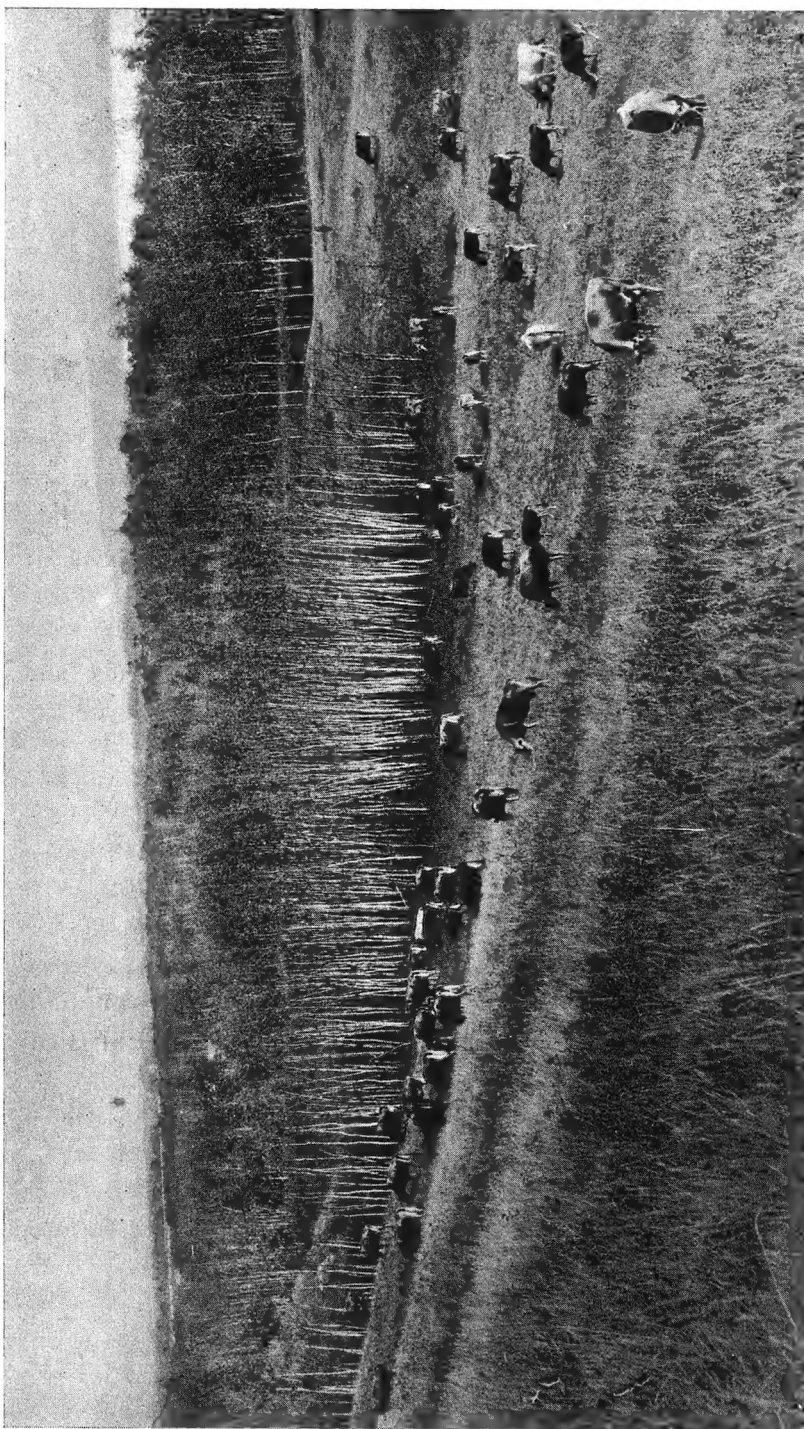
J. H. Hare, Poultry Commissioner.

D. Douglas, Director of Demonstration Farms.

Benj. Lawton, Game and Fire Commissioner.

Miss Jessie McMillan, Director of Alberta Women's Bureau.

D. A. McCannel, Publicity Commissioner and Editor of Publications.



Jersey cattle on the banks of the Peace River—the farthest north herd of this breed of cattle in the world.

Report of the Deputy Minister

HONOURABLE GEORGE HOADLEY,
Minister of Agriculture,
Edmonton, Alberta.

SIR,—

I have the honour to submit herewith the twenty-fourth Annual Report of the Department of Agriculture.

There has been a steady improvement in general agricultural conditions over the entire Province during the season of 1928. The large crop in 1927, with reasonably good prices prevailing for grain, and for live stock and live stock products, enabled farmers to liquidate a great portion of their indebtedness. Farmers generally were better able to finance their spring and summer operations than has been the case for some years past. It has been noticeable that the power supply of the ordinary farm has been materially increased during the season, with the result that better cultivation methods have been employed and a greatly increased acreage of new land has been broken. The growing season was all that could be desired, and a heavy crop of high quality was in sight until late in the month of August, when severe frosts were experienced over most of the Province. The entire effect of this frost was not fully realized until harvesting operations were completed and until a considerable amount of grain had reached the elevators. Grading returns left no doubt as to the full extent of the damage which had been done. The yield of grain was reduced approximately 25 per cent. from the early August prospect, and the quality was reduced from two to four grades. In spite of the damage done, the volume of wheat produced was in excess of 155,000,000 bushels, and while the quality generally was not as high as in some previous years, most of it has been marketed as straight grades.

A particularly favorable fall season enabled farmers to carry out their harvesting and threshing operations with very little delay and inconvenience. Combines and swathers have been introduced on a large scale. A survey shows that 1,095 of these machines have been in operation in the Province. The reports from farmers go to show that in the main the work which they have done has been satisfactory. Those operating large farms have been particularly pleased on account of the reduction in the cost of labor and the rapid manner in which it is possible to handle a large acreage.

Hail took a heavy toll throughout certain parts of the Province, but while the loss to the individual was heavy, the total yield was not very materially affected. Considering the entire Province, there was a very small loss from damage by insects and plant diseases.

WEEDS.

The weed menace has been giving some concern during the past few years. A provincial-wide campaign, headed by the Department

of Agriculture, and in which many organizations co-operated, has resulted in a great improvement in the weed situation. There is no question that weeds have been on the increase for some years. It is evident, however, that public opinion has been aroused to a point where all good citizens are now aware of the menace which weeds are to the general prosperity of the Province; and, as a consequence, many organizations and the public generally, are bending their energies toward the control of weeds. The Department has had hearty co-operation on the part of farmers' organizations and municipalities, in particular. In this respect it should be mentioned that the cities of the Province have been most willing to work with the departmental officers in an endeavor to control weeds within their boundaries. The department is conducting extensive experiments with certain chemicals as agents, for the control of weeds. These experiments have not been carried on for a sufficient length of time to warrant definite statements being made as to their effectiveness. It may be said, however, that some of these chemicals give great promise, and it is quite possible that within the next season they will come into general use in areas where cultivation methods are not practicable.

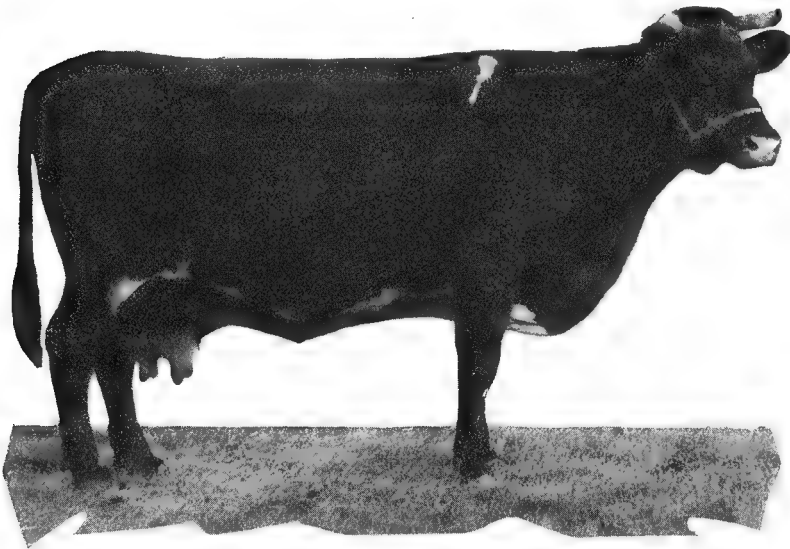
A "Better Seed Week" was conducted during the middle of March. In this campaign, a large number of organizations joined with the department in giving widespread encouragement to the use of good, clean, and pure seed, of strong vitality. Reports from various quarters gave abundant proof that the campaign was effective, and without doubt resulted in a very greatly improved quality of seed being put into the ground.

LIVE STOCK.

Good prices have been realized for cattle, sheep and hogs during the season. There has been an abundance of feed, so that animals have been coming to the market in good condition. In spite of a decrease in the number of live stock marketed during 1928, the value of the animals handled on the Edmonton and Calgary stock yards for the year shows a very substantial increase. Sheep continue to be a profitable line of live stock. The numbers and quality of the farm flocks is steadily increasing. This improvement is most marked at the Calgary, Edmonton and Lacombe fall sheep sales. Large numbers of sheep, of high quality, have been purchased at these sales to form the nucleus of many new farm flocks.

The department has carried on negotiations with several firms of Japanese importers, who are interested in securing live stock and wool. A trial shipment of pure bred Holstein cattle has recently been sent to Japan, financial arrangements for the purchase having been made by the Japanese importers with a Canadian bank. The department was asked to make the purchases and attend to the shipping arrangements. Samples of the various grades of wool produced in the Province have been sent to Japan with price questions. This country is an extensive importer of wool, and has shown much interest in the quality of the product which Alberta is in a position to supply. On account of our location we are favorably placed as far as freight rates and shipping are

concerned. The wool-growers of the Province are also much interested, and have urged the department to use its best efforts in the development of the trade.



Registered Shorthorn cow, "Cherry Blossom"—151079.
365-day production record, 10,050 pounds milk; butterfat test, 4.51 per cent. Owned by Alberta Department of Agriculture.

POULTRY.

The poultry industry continues to develop rapidly. On a large number of farms, birds of high-producing strains and pure breeding are replacing the mongrel flock, and in addition up-to-date houses are being erected, equipment installed, and attention given to the flock; which makes it possible to secure substantial and profitable returns from this branch of farming.

CO-OPERATION.

The various pools for the marketing of agricultural products have made substantial progress during the year. The farmers generally have full confidence in these marketing organizations, and as a result give their hearty and loyal support. The success of these pools has made it possible to develop rapidly a co-operative spirit among the people. The presence of such a strong spirit, combined with full confidence in the management, is a guarantee of the future success of the pool movement. An extensive programme of education in co-operation has been undertaken during the year. The wheat pool has engaged several field men to work amongst the pool members for the purpose of forming a closer contact between the central organization and its members.

INSTITUTE OF CO-OPERATION.

A very successful Institute of Co-operation was held in Edmonton during the last week of June. The programme was arranged with a view to securing the best talent available on the continent. Outstanding men in various lines of co-operative enterprises were brought to the Province. In addition provision was made for those who are actively engaged in connection with the various Provincial pools, to discuss matters of vital concern to the delegates. The board of trustees, of the Surplus Wheat Board Funds, provided the finances and asked the Department of Agriculture to organize and conduct the institute. The Minister of Agriculture appointed a committee consisting of representatives of the various pools, and a representative of the department, to be responsible for this work. The institute was an outstanding success from the standpoint of attendance and interest in the addresses and discussions.

Special attention has been given to the subject of co-operation in connection with the instruction given at the Provincial Schools of Agriculture. All students, both boys and girls, are given lectures by a regular and qualified member of the school staff, in the general principles of co-operation. Arrangements were made with the pools whereby a member of the staff of each pool visited each of the Schools of Agriculture, and delivered several lectures relating particularly to the activities of the pool which he represents. This will enable the students at these schools to secure a more intimate and definite knowledge of the co-operative work which is being carried on in the Province.

THE SCHOOLS OF AGRICULTURE.

Four Schools of Agriculture have operated during the season with an attendance of approximately 600 students. New dormitories have been built at the Olds and Vermilion schools. These are filled to capacity, and in the case of the Olds school, several students have been obliged to board in homes throughout the town. The dormitories have proven to be a distinct addition to the school equipment and accommodation. Parents are more willing to send their children to an institution where proper supervision can be given and greater control exercised. The school system is designed primarily to give instruction to farm boys and girls during the winter months. A large part of the time of the staff is taken up with extension work amongst farmers and farm women during the spring, summer and fall. This includes school fair direction, supervision of boys and girls' club work, attending meetings, conducting short courses at the schools, and receiving groups of farmers and farm women who continue to visit these institutions in increasing numbers each year.

IMMIGRATION.

For some years past, a plan of training British boys during the winter months at the Agricultural Schools has been in operation. This policy has been discontinued and a new one adopted. Arrange-

ments have been made with the Overseas Settlement Board whereby 200 British boys and 200 British girls will be trained at the Schools of Agriculture during the months of April, May, June, and July. The schools at Claresholm, Olds, and Vermilion will be used for this purpose. The boys will be brought in two lots of 100 each, and given one month's training, following which they will be placed with farmers. Similarly the girls will be brought out in lots of 100 each, and placed in farm homes after a month's training in practical housekeeping, gardening, poultry-keeping and dairying.

The selection of these boys and girls will be made by the Honourable Herbert Greenfield, the representative of the Province in London. The Overseas Settlement Board has agreed to share the expenses of training with the Province. Through such a policy, it is hoped to secure the best type of British boy and girl who will later make good Canadian citizens.

During the summer months a number of British emigrants were sent out by Mr. Greenfield. Upon arrival in Edmonton, they were interviewed by this office, and given advice respecting location, employment and plans for settlement. The Dominion Land Settlement Board has co-operated willingly and effectively with the department in securing locations for these new settlers. In this the department wishes to express its sincere appreciation.

The Province has again secured a large share of the important prizes in grain and live stock at the Royal and International Shows, and in addition has been successful in capturing several championships. The exhibition of high quality grain and live stock has resulted in much favorable advertising to the Province.

During the year the following services have been transferred to the Department of Municipal Affairs: Seed Grain and Relief Collections; Debt Adjustment; Supervision of Live Stock Encouragement Act. The enforcement of the laws for the protection of game have also been taken over by the Provincial Police.

The activities of the Department will be outlined in detail by the heads of the various branches, whose reports follow.

Respectfully submitted,

H. A. CRAIG,

Deputy Minister.



Clydesdale stallion, "Emigrant's Masterpiece"—24395.
Owned by Alberta Department of Agriculture.

Report of the Live Stock Commissioner

(S. G. CARLYLE)

The general live stock situation in the Province is in a very healthy condition and the prices for all classes of stock have been satisfactory, and in the case of cattle, much higher than for a number of years. This has revived a feeling of optimism among the breeders of stock, which has not existed since 1919. In the case of sheep and hogs the standard has been well kept up and considerable improvement made, but it is unfortunately a fact that there are not the number of good pure bred horses and cattle in the Province today that there were ten years ago. There never was a time in the history of the Province when there was such a dearth of good sires, and it is to be hoped that with the higher prices paid for commercial stock this condition will soon be remedied.

HORSES.

There was a good demand for horses in the early part of 1928, especially just before seeding, and trading was quite brisk among local dealers. There was also a good demand from the other Provinces, and this kept up through spring and early summer, and prices were generally very satisfactory. During the late summer and fall months the demand slackened, and the prices decreased in proportion to the demand. The fall of 1928 was very unfavorable for lumbering, and this usual outlet for a number of our larger, well broken, aged horses from the farms was not as great as in other years. A large number of our horses were shipped to the eastern Provinces, with Saskatchewan and Manitoba taking a limited number. As far as we have been able to ascertain, there has been a slight reduction in the number shipped out of the Province in comparison with 1927. In that year there were 22,900 shipped, in 1928 close to 20,000.

With a largely increased acreage of land being broken in the Province each year and the average area of tilled land on the farms increased, the advantages of the tractor have been brought to the attention of the farmer. When it comes to a comparison between the tractor and horses in getting work done quickly, there is very little argument in favor of the horse, but when the comparison is made in doing the work economically, horse work will show to much better advantage. The tractor, however, has been brought up to a high state of efficiency, and this can not be said of a large number of the big teams of horses on the farms. Attention is now being paid to the new and improved hitches for big teams, and demonstrations are being given at plowing matches, fairs, etc., in some of the other Provinces and states of the Union, to demonstrate to the farmer how to make his teams more efficient. However, in order to raise efficient horses we must have good sires to breed them, and there is a great lack of these in our Province today. We have only

some thirty stallion clubs in Alberta compared with one hundred and fifty in Saskatchewan. If the horse industry is to survive and our present standard to be maintained, good sires will have to be imported into the Province at an early date.

The demand for good saddle horses still continues and the men who have the time and ability to raise and train this class of horse will always find a satisfactory market for the good ones. The breeding of these horses is largely confined to the Calgary district.



Pair of registered Clydesdale geldings, owned by Alberta Department of Agriculture. Won third and fourth prizes, Toronto Royal Winter Fair, 1928.

There are a few good breeders in the north, but not as many as we should like to see.

Alberta showed fewer horses at the Royal Show this year than for some years past, and while the entries from this Province made a good showing and the quality was exceptionally high, they failed to take any of the coveted red ribbons.

BEEF CATTLE.

While the number of beef cattle in the Province has decreased, the value of all classes of cattle has increased to such an extent that our cattle industry is valued many thousands of dollars higher than a year ago. There is a better demand for purebred breeding cattle than for some years, and good purebred bulls are at a premium. At the sales new high levels have been reached, and particular attention should be drawn to the sale of stock imported by Messrs. Yule and Sharpe, held at Calgary on November 2, 1928, when an average of \$1,000 was received for the bulls and \$680 for the females. The highest priced bull sold for \$2,200 and the highest priced cow at \$1,100. Prices such as these show clearly the confidence of the breeder in the future breeding of purebred live stock. The bull sales held at Calgary and Edmonton and in other parts of the Province showed a considerably higher price than in immediately preceding years.

The price of commercial cattle has also reached new high levels, especially during the months of August and September, when there was a very heavy demand for our stockers and feeders for United States markets. Eastern Canada was also a strong bidder for our feeders and stockers, and the great majority of them have found a market in Canada rather than in the United States. At the Calgary and Edmonton stock yards fewer cattle have been handled, but their value is much higher than in 1927. Cattle sales at the Calgary stock yards in 1927 were 97,480 head with an estimated value of \$5,128,023.58. In 1928 a total of 82,226 head passed through the yards at a value of \$5,620,989.64, a decrease of 15,254 head of cattle and an increase of \$492,966.06. There passed through the Edmonton stock yards 68,875 head of cattle in 1928, being 3,783 less than in 1927, but realizing \$730,000 more in returns. The calf market was strong throughout the year, with a top price of \$12.00 in May and the lowest \$8.75 in November. An increase of 898 calves is shown in the receipts on the Edmonton market.

During the past few years there has been an exceptionally heavy movement of cows, heifers and calves to market. Prices for this class of beef have been unusually high as compared with those for steer beef. Steers are in good demand when there is a good export market, but when this market is dull the price drops to almost the price of heifers. The marketing of heifers and cows has increased to a very noticeable extent as compared with the number of steers marketed in the past five years. The report of the Dominion Live Stock Branch shows that in 1923 a total of 40,149 steers were marketed as compared with 55,477 heifers and cows, the ratio being seven heifers to five steers. In 1926 48,817 steers and 100,557 heifers and cows were shipped to markets, this being a proportion

of ten heifers to five steers. In 1927 the ratio was still wider. This clearly shows the movement of our breeding cattle from off the farms, but owing to the high level of prices through 1928, to which we have referred, it would appear that this heavy shipment of female stock has reached its peak and from now on we may expect farmers again to start raising more cattle.

The fall of 1928 was very mild and cattle went into winter quarters in exceptionally good condition, and as there was no shortage of feed all classes of cattle wintered well. On the ranges there has been plenty of grass and the grass-fed cattle shipped out were in prime condition and good prices were realized on the eastern markets.

While the number of beef cattle has decreased on the farms in central and northern Alberta, the rancher on the other hand has increased his breeding stock as well as improved the quality of his holdings.

At the Stocker and Feeder Show held in Calgary on October 22 and 23, a total of 447 two-year-old steers were sold at an average of \$8.18 per hundredweight, 321 yearling steers at an average of \$8.64 per hundredweight, and 175 calves at an average of \$10.46 per hundredweight.



Registered Holstein cow, "Hengeweld Pearl Nephela 5th"—61068.
Mature production record in 360 days, 23,676 pounds of milk; butterfat test, 3.77 per cent. Owned by Alberta Department of Agriculture.

DAIRY CATTLE.

There has been a decrease in the volume of dairy production during the year, and especially in creamery butter, owing to the

fact that farmers have cut down their dairy herds and in a great many cases have sold out altogether. Larger acreage brought under cultivation and the higher price of grain the last couple of years have been largely responsible for this. There does not at the present time seem to be any marked tendency for the average farmer to go back into dairying. If he does go back into cattle, he is more likely to select beef cattle, as considerably less labor is involved. It would appear that at the present time, dairying will be confined to the vicinity of the cities and towns, for fluid milk supply, to the irrigated districts where abundance of feed for both summer and winter is practically assured, and to the newly-settled parts of the Province where there is still plenty of rough pasture and summer feed. There are many good herds of dairy cattle still in the Province and we do not expect to see the number decreased, but we do not predict any immediate increase in the near future. The largest herd of pure-bred Holsteins in Canada is located in Alberta and owned by the Canadian Pacific Railway Company at Strathmore. The demand for dairy cattle from farmers in the country who are not supplying the fluid milk market, is largely for dairy Shorthorns or dual purpose cattle, if these could be obtained with satisfactory breeding.

SHEEP.

Sheep have increased in numbers in Alberta in the last ten years much faster than have any other class of stock. Alberta stands third among the Provinces of Canada in the total number of sheep kept, the sheep population now being well over half a million. The sheep industry is on quite a satisfactory basis. Lamb prices have maintained a consistently high level and there has been an increased demand each year for good breeding stock. More flocks are being established each year among the farmers in the settled districts, and this is likely to continue for some years. Sheep fit in well with grain-growing, especially if there is any vacant or rough land available for summer pasture. From one district in Alberta where a few years ago only a small number of sheep were kept, 1,200 lambs were shipped in one day in 1928, and three carloads of wool were also shipped from that station. As with beef cattle, the market demand for sheep is for a lighter carcass than some years ago, and the top price paid at the present time is for well finished lambs weighing from 80 to 90 pounds.

In the best interests of the sheep industry in this Province, it might be well to concentrate our efforts on fewer breeds, and on those breeds which more nearly fill the market requirements as to wool and mutton.

An exhibit consisting of thirty-five Hampshires and Suffolks was made this year at the Royal Show at Toronto. These were from the flocks of the Canadian Pacific Railway and the Vauxhall Stock Farm. They were a splendid lot of sheep and were a credit to the Province. The competition in all classes was very keen, but they were successful in winning the following prizes:

Suffolks:

Reserve Champion Ram	C.P.R. Farm
1st Prize Ram.....	C.P.R. Farm
Champion wether lamb	Vauxhall Farm
1st prize wether lamb	Vauxhall Farm
2nd prize ram lamb	C.P.R. Farm
2nd prize yearling ewe	C.P.R. Farm
2nd prize pen of 4 lambs	C.P.R. Farm
2nd prize flock	C.P.R. Farm
3rd prize pen of 4 lambs	Vauxhall Farm
4th prize yearling ram	Vauxhall Farm
5th prize yearling ewe	Vauxhall Farm

Hampshires:

2nd prize yearling ram	C.P.R. Farm
3rd prize flock	C.P.R. Farm
4th prize ram flock	C.P.R. Farm
4th prize pen of 4 lambs	C.P.R. Farm

Hogs.

Fewer hogs were raised in the Province in 1928 than in 1927, and according to market reports this was reflected in decreased marketings on Calgary and Edmonton stock yards. There was, however, a slight improvement in quality. The price paid in both years was highest in the month of August and as soon as heavy receipts came on the market price decreased very rapidly. The fluctuations in price have been very marked, and it would apparently be good policy for hog-raisers to have some of their hogs farrowed a little earlier and bring some of these pigs on the market when the price is high, and fewer when the price is low, to stabilize prices throughout the year.

The coast market has been active and has taken a large number of our hogs, and everything should be done to develop this market and raise the kind of hogs that the coast trade demands. On an investigation by a committee composed of representatives of the Dominion and Provincial Governments and the U.F.A., it was found that the coast market is calling for a longer and leaner type of hog, as most of the plants have an excess of lard which they have to dispose of at a rather low price. They, however, at the present time demand a little more finish than is called for by the export trade in the select bacon hog, and if some way could be devised that the select bacon hog could be retained for the packing plants and shipped as export bacon, and if there were a second quality of bacon hog which carries a little more finish, and which would perhaps be best suited for the coast trade, the farmers would realize a better price for both these grades of hogs.

One live stock train was operated in the southern part of the Province in conjunction with the Canadian Pacific Railway and one forage and seed train in the northern part of the Province in conjunction with the Canadian National Railway. The meetings held at points along these lines were very successful and a great deal of interest was taken by the farmers.

On the forage train stops were made at the following places: Alliance, Kelsey, Heisler, Kingman, Dinant, Chauvin, Edgerton, Wainwright, Viking, Holden, Tofield, Duffield, Evansburg, Onoway, Sangudo, Cherhill, Greencourt, Athabasca, Rochester,

Clyde, Vilna, Gibbons, Redwater, Radway Centre and St. Paul. Approximately 5,543½ pounds of seed were sold and the attendance was over 2,000.

On the C.P.R. in the southern part of the Province stops were made at the following places: Macleod, Monarch, Kipp, Diamond City, Iron Springs, Picture Butte, Turin, Coaldale, Barnwell, Taber, Sterling, Magrath, Spring Coulee, Cardston, Glenwoodville, Hillspring and Raymond. Approximately 3,331 people attended these courses.

Report of Boys and Girls' Swine Clubs

(S. G. CARLYLE, *Supervisor*)

During the year there were 24 clubs organized in various parts of the Province, with a total membership of 456 boys and girls who fed and cared for 2,236 hogs. Included in this latter figure are a number of young pure-bred sows that are being carried over for breeding purposes by the members. This particular part of the work is having a good effect, throughout the districts where swine clubs have been organized, for some time, by a marked improvement in the quality of hogs being shipped to market.

Of the 24 clubs, 3 were organized in new territory, the rest being in districts where swine clubs were in existence in former years. From past experience, it would seem that the life of a swine club in any one district is five or six years, and that if the work is to continue the supervisors must reach out to newer districts. This is as it should be. It would not be fair for one or two districts to get all the services of these men, and we have found that wherever a swine club has been established for a couple of years, a great improvement in the quality of the stock has taken place, so that when once a district has started to improve its swine by breeding and feeding, the services of the supervisors can better be used in new fields.

We wish to mention that the Dominion Live Stock Branch has co-operated with the supervisors in furnishing pure-bred boars to these clubs. Without this assistance improvement in the quality of hogs would have been very much slower. The Dominion Live Stock Branch has also been very generous in donating prize money for car-load lots, and also for local competitions in the country districts.

The stock yards company, packing plants, commission firms and the James Ramsey company have also assisted the work very greatly, by offering prizes in the various classes at the annual competitions held in Calgary and Edmonton.

A great many more clubs could be organized each year if there were sufficient supervisors to organize and look after them, and the work is retarded on this account.

Swine club competitions, held at both Calgary and Edmonton, were quite successful. The winning team on the C.N.R. was N. Williams and R. Williams from Vermilion, trained by Mr. J. F. Andrew. The winning team on the C.P.R. was Margaret Roper and Nellie Crawford from Lacombe, trained by Mr. Gavin Barbour. The railway competition has been a great stimulus to the swine club work, and the trip of these boys and girls to the Royal Show as guests of the railway companies has proved a valuable education to them.

Report of the Brand Recorder

(S. G. CARLYLE, *Recorder*)

During the past year 526 new horse brands and 662 new cattle brands were recorded to their respective owners, while 186 transfers and 3 changes were registered. Certified extracts of brands numbered 9, searches 3, strays 3,659, and renewals 4,416 (cattle 2,467 and horses 1,949), the total number of transactions being 9,464.

Compared with the year 1927, these transactions show an increase of 34 horse brands, 60 cattle brands and 26 transfers, with a decrease of 2 changes, 1,443 strays and 108 renewals.

The number of brands issued to date are as follows: 38,044 horse brands, 56,964 cattle brands (inclusive of two-character brands). The two-character cattle brands numbered 6,556, making a total of 95,008.

The following table shows the different transactions which have taken place since separate records for the Province have been kept:

Year.	Extracts Searches &					
	Horse.	Cattle.	Trans.	Changes.	Strays.	Renewals.
1906	1361	1894	384	38	73	.....
1907	1030	1230	430	28	73	.....
1908	1103	1225	421	29	292	.....
1909	1308	1326	430	33	783	.....
1910	1891	1672	534	34	1218	.....
1911	1538	1280	362	32	1408	.....
1912	1545	1542	374	16	1655	.....
1913	1471	2059	419	11	1795	.....
1914	1964	2629	395	18	1932	.....
1915	1350	1899	743	27	1372	9080
1916	1503	2833	463	28	801	3679
1917	1839	3370	551	33	773	5437
1918	2161	3455	617	40	985	5084
1919	2079	3165	572	46	2125	8276
1920	1863	2133	514	30	1944	4649
1921	896	1304	308	22	2401	5179
1922	708	1092	225	23	2548	4449
1923	633	806	221	33	4035	4450
1924	737	1045	365	5	3826	5878
1925	585	905	155	3	5547	3924
1926	623	837	185	4	5219	4060
1927	492	602	160	5	5114	4524
1928	526	662	186	3	3671	4416
Average for 23 years	1248	2564	386	22	2154	2981

Report of the Field Crops Commissioner

(W. J. STEPHEN)

The work of this branch for the year 1928 consisted in promoting and supervising field crop competitions, combined seed crop and cleaned seed competitions, good farm competitions, local seed fairs, plowing matches, Provincial seed fair, the operation of the Government cleaning and grading plant for the handling of registered seed, the marketing of registered seed, weed control and eradication, school fairs, experimenting with a grain separator cleaning attachment, and directing experimental work throughout the Province with superphosphate fertilizer.

FIELD CROP COMPETITIONS.

Field crop competitions and combined seed crop competitions were held by the Clandonald colony, Vermilion and Wetaskiwin Boards of Trade, Camrose Agricultural Society, Athabasca Board of Trade, Lloydminster Agricultural Society, Stettler Board of Trade, Edmonton Board of Trade, Calgary Board of Trade, Soldiers' Settlement Board, Calgary, Red Deer Board of Trade, Morrin Seed Growers, Bindloss Agricultural Society, Kiwanis Club, Hanna, Lake Saskatoon Agricultural Society, Keystone Seed Club, Youngstown, Wastina Seed Club, Youngstown, Youngstown Seed Club, Crocus Plains Seed Club, Youngstown, Scotfield Seed Club, Youngstown.

The following were the judges of these competitions: Messrs. L. A. Parry, N. F. Bell, K. Walker, W. Robinson, T. H. Taylor, W. G. Smith, D. Cameron, Geo. Ingram, H. W. Scott, F. H. Newcombe, E. L. Gray, W. Moody, J. Walters, B. J. Whitbread, W. J. Stephen, J. D. Foster.

The Calgary Board of Trade offered a trophy for the best field of wheat entered in any field crops competition south of Red Deer. This was won by P. J. Rock of Morrin. The Edmonton Board of Trade also offered a trophy for the best field of wheat in northern Alberta. This was won by the late W. B. Scott of Kelsey. Hon. George Hoadley offered a grand challenge cup for the best field of wheat entered in any field crop competitions held in Alberta. This was also won by P. J. Rock of Morrin. These special trophies created a great deal of interest and were keenly sought after.

PLOWING MATCHES.

Plowing matches were held at Edgerton, Mannville, Chauvin, Vermilion and Stettler. The judges were as follows: Messrs. Donald Douglas, A. Paton, K. Walker and John Broadfoot. Owing to unfavorable weather a number of other plowing matches were cancelled.

LOCAL SEED FAIRS.

The following local seed fairs were held: Experimental Union, Olds, judge, W. J. Stephen; Busby, judge, F. H. Newcombe; Lake Saskatoon, judge, A. R. Judson; Camrose, judge, J. D. Foster; Bowden, judge, F. S. Grisdale; Colinton, judge, J. D. Foster; Morrin, judge, local judge; Vegreville, judge, J. D. Foster; Lousana-Hays Agricultural Society, judge, J. D. Foster; Lloydminster Agricultural Society, judge, J. D. Foster; Chauvin, judge, J. D. Foster; Athabasca Bench Show, judges, L. A. Parry, W. J. Stephen; Youngstown, judge, James Murray; Hanna, judge, James Murray; Medicine Hat, judge, M. L. Freng; Leduc, W. J. Stephen; Athabasca, judge, W. J. Stephen.

PROVINCIAL SEED FAIR.

The Provincial Seed Fair was held in Calgary, January 16 to 20. There was the usual excellent display of seed grain, grasses, clover seed, potatoes, corn, and boys and girls' exhibits. The fair was added to in attractiveness by the very splendid displays shown by the C.P.R. farms of Brooks, the Publicity Branch of the Provincial Department of Agriculture, and by the Dominion Seed Branch, Calgary. Many sales were effected by exhibitors on this occasion. It was estimated that over ten thousand people availed themselves of the opportunity to visit the fair. There were approximately 450 entries. At the time of the fair the annual meeting of the Alberta Seed Growers' Association was held in conjunction with meetings held by the Department and Provincial Seed Board.

PREMIUM WINNERS AT THE CHICAGO INTERNATIONAL GRAIN AND HAY SHOW AND THE ROYAL WINTER FAIR AT TORONTO.

The Field Crops Branch assembled all exhibits for the above shows at the Government cleaning and grading plant, Edmonton, from whence they were shipped at Government expense to Toronto and Chicago. The department also arranged to put these exhibits in place. The very creditable showing of the Province is evidenced by the following list of premiums won:

ROYAL WINTER FAIR, TORONTO.

WHEAT

First and Championship.....Herman Trelle, Wembley.
SeventhRobt. Cochrane, Grande Prairie.
TenthP. J. Rock, Morrin.

OATS

SecondHerman Trelle, Wembley.
ThirdNels Linden, Wetaskiwin.
FourthJ. H. B. Smith, Wolf Creek.
SeventhHans Mayer, Vegreville.
EleventhP. J. Rock, Morrin.

PEAS

First and Championship.....Herman Trelle, Wembley.
SecondR. U. Clubine, Wembley.

BARLEY

FourthNorman Peck, Leduc.

INTERNATIONAL GRAIN & HAY SHOW, CHICAGO

WHEAT

First and Reserve Championship.....	Herman Trelle, Wembley.
Fifth	P. J. Rock, Morrin.
Twenty-eighth	J. W. Shearer, Morrin.
Twenty-ninth	Albert Harvie, Edgerton.

OATS

Second	Herman Trelle, Wembley.
Third	Nels Linden, Wetaskiwin.
Fourth	J. H. B. Smith, Wolf Creek.
Fifth	J. W. Biglands, Lacombe.
Sixth	Major H. G. L. Strange, Fenn.
Ninth	A. F. Galloway, Vermilion.
Eleventh	Richard Harrison, Ohaton.
Fourteenth	P. J. Rock, Morrin.
Sixteenth	A. Lougheed, Bowden.
Nineteenth	Chas. F. Lougheed, Knee Hill Valley.

EARLY OATS

Fourteenth	A. Lougheed, Bowden.
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ALFALFA

Second	A. J. Stephens, Bow River.
Sixth	N. D. Ferguson, Duchess.
Eleventh	Robt. Cochrane, Grande Prairie.

TIMOTHY

First	A. Lougheed, Bowden.
Ninth	R. Cochrane, Grande Prairie.
Eleventh	A. Mongeon, Pincher Creek.
Thirteenth	Wm. Bratz, Pincher Creek.
Fourteenth	Otto Schoening, Pincher Creek.

TWO-ROWED BARLEY

Tenth	Clyde C. Gillies, Strathcona.
Thirteenth	Norman Peck, Leduc.

SIX-ROWED BARLEY

Thirteenth	A. Lougheed, Bowden.
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SMALL YELLOW FIELD PEAS

First	Herman Trelle, Wembley.
Second	Major H. G. L. Strange, Fenn.
Third	Robt. Cochrane, Grande Prairie.
Championship in Peas	Herman Trelle, Wembley.

CORN SHOW.

The Provincial corn show, which for the last several years has been a very marked success and created much interest on the part of the public, was not held this year, owing to the scarcity of high-class seed corn, as a result of unfavorable weather conditions.

SCHOOL FAIRS.

During 1928 a total of 115 school fairs was held. The Province is divided into the following main school fair districts: Claresholm, Raymond, Olds, Sedgewick and Vermilion. An endeavor has been made the last few years to organize the Peace River district for school fair work, with the result that the number of school fairs held in the north during 1928 showed a very considerable increase over previous years.

While the Field Crops Branch has the general supervision of this work in the Province, the details of the work locally are handled by the staff of the Claresholm, Olds, Raymond, and Vermilion Schools of Agriculture, and by the District Agriculturists at Sedgewick and Vegreville. The representatives of the Department of Agriculture at all times work in close harmony with the school inspectors and the Provincial Department of Education.

The Department of Agriculture and the Department of Education supplied judges for the various school fairs. The Department of Agriculture in addition supplied printed instructional matter, did organization work and assisted local associations in any way possible. Two-thirds of the money for live stock prizes was also paid by the Department, providing this portion did not exceed \$75 to each school fair centre. The Department of Education paid 50 per cent. of the amount awarded as prize money for penmanship and composition up to a maximum of \$1.25 in each class.

The Department of Agriculture issued a diploma to the school obtaining the highest number of points per pupil enrolled at March 15 in any school fair on the entries in agriculture and home economics classes. The Department of Education also issued a diploma to the school obtaining the highest number of points per pupil enrolled at March 15 in any school fair on the entries in school work.

In the Vermilion school fair district fairs were held at Wembley, Falher, Berwyn, Sexsmith, Grande Prairie, Halcourt, Bruderheim, Vegreville, Waskatenau, Stony Plain, Legal, Fort Saskatchewan, Clover Bar, Colinton, Sangudo, Onoway, Barrhead, Sturgeon Valley, Morinville, Mundare, Minburn, Islay, Landonville, Elk Point, Ashmont, Wainwright, Dewberry, Mannville, Vermilion, Innisfree, Lee Park, Ranfurly, Edgerton. In the Sedgewick district school fairs were held at Sedgewick, Camrose, Strome, Alliance, Treaty Hill, Hardisty, Amisk, Czar and Provost.

In the Olds district, fairs were held at Byemoor, Lousana, Mountain View, Springwater, Cereal, Oyen, Sedalia-Naco, Consort, Veteran, Fleet, Coronation, Castor, Stettler, Delburne, Red Deer, Raven, Markerville, Sylvan Lake, Clive, Lacombe, Hay Lakes, Sunnyslope, Sundre, Dog Pound, Cochrane, Olds, Innisfail, Leslieville, Eckville, Carbon, Keoma-Kathryn, Carstairs, Elnora, Huxley, Scollard, Hanna, Three Hills, Mayton.

In the Claresholm district, fairs were held at Macleod, Twin Butte, Travers, Claresholm, Langdon, Red Deer Lake, Strathmore, Forest Lawn, De Winton, Foothills, Hussar, Standard, Chancellor, Milo, Cowley, Arrowwood, Carseland, Carmangay, Brooks, Blackie, Vulcan, Gleichen.

In the Raymond district, fairs were held at Magrath, Glenwoodville, Cardston, Spring Coulee, Warner, Stirling, Coaldale, Iron Springs, New Dayton, Raymond, Milk River, Allerston, Coutts.

The year's program of school fairs included 906 rural schools with 28,670 students, and the total number of exhibits was 85,765.

SCHOLARSHIP SHORT COURSES.

A scholarship short course is provided at each school of Agriculture. A boy and a girl are selected from each school fair centre for a free week's course, to be taken at the Government's expense, at one of the Schools of Agriculture the following year. This privilege is granted to the boy and girl winning the greatest number of prizes at the school fair. These short courses were held during 1928 at Vermilion, Olds, Claresholm, and Raymond Schools of Agriculture.

For the pupils who attend this course at each of the Schools of Agriculture, the Department of Agriculture offers a scholarship which covers a winter's free course to a boy and girl at a School of Agriculture. This includes free board and lodging for five months, railway fare to the school and return home at the end of March, also a return trip home at Christmas. It also includes up to ten dollars for text-books.

NOXIOUS WEED WORK.

During the year 1928 sixteen field supervisors were appointed and assigned definite areas of the Province to work in. The duty of each supervisor was to educate the people of his district to know the noxious weeds, to realize the seriousness of the weed situation, and to bring into effect recognized methods of control and eradication. The co-operation of every individual was solicited, the idea being not so much to compel farmers and others to keep their weeds under control, as to encourage community action and a desire to maintain clean farms. This policy proved popular and effective. The field supervisors, however, found it necessary in a number of cases to enforce legally the provisions of the Noxious Weeds Act. The majority of the municipalities, towns, cities, railway companies and irrigation companies showed their willingness to co-operate in weed control, and are to be commended on the good work they are doing.

Sixteen inspectors were appointed by the Minister of Agriculture in local improvement districts. These men covered forty-five districts and were guided in their activities by the various field supervisors in whose territories they worked.

A large number of meetings were held throughout the year by the different members of the Field Crops Branch staff, the majority of which were well attended and much interest and enthusiasm was manifested.

The Advisory Weed Board, which was named by the Minister during the year of 1928, gave the Department very valuable assistance in deciding upon the nature of the weed campaign for the year. The members of the Advisory Weed Board are: H. A. Craig, Chairman; H. W. Bright, Organization of Rural Municipalities; H. E. G. H. Scholefield, U.F.A.; Don. H. Bark, Seed Growers' Assn.; Clyde C. Gillies, Unorganized Farmers; F. H. Reed, Dominion Government; Geo. Bennett, Wheat Pool; W. J. Stephen, Secretary, Provincial Government.

Weed conferences were held in June and July at Raymond,

Claresholm, Olds, Vermilion. Special weed meetings were also held at Falher, Berwyn, Spirit River, Beaver Lodge, Halcourt, Roycroft, Waterhole and other points. The object of these meetings was to endeavor to bring before the public the seriousness of the weed situation and to solicit their co-operation in the campaign. Another purpose of the meetings was to educate municipal weed inspectors, councillors and others in the proper methods of weed control and eradication, organization, etc.

Weed Bulletin No. 2 was issued and distributed during the year. Weed posters were also prepared and were distributed free of charge to schools, farmers, municipal councils and others.

GOVERNMENT CLEANING AND GRADING PLANT.

The Provincial Government cleaning and grading plant concluded its sixth year of operation on May 31, 1928.

The following quantities of grain passed through the plant:

MARQUIS WHEAT		Bushels.
First generation		551 ½
Extra No. 1, first generation		74
Second generation		1887
Extra No. 1, second generation		3531
Third generation		2466
Extra No. 1, third generation		5497
No. 1 Seed		82
No. 2, Seed		1870
No. 3, Seed		134
Screenings		2603
Total Marquis Wheat		18,695 ½

BANNER OATS		Bushels
First generation		306
Extra No. 1, first generation		249
Second generation		1877
Extra No. 1, second generation		1866
Third generation		178
Extra No. 1, third generation		304
No. 1, Seed		1836
No. 2, Seed		453
No. 3, Seed		165
Screenings		1863
Total Banner Oats		9097

VICTORY OATS		Bushels
First generation		1469 ½
Extra No. 1, first generation		765
Second generation		1320
Extra No. 1, second generation		665
Third generation		825
Extra No. 1, third generation		692
No. 1, Seed		945
No. 2, Seed		1370
No. 3, Seed		171
Screenings		1800
Total Victory Oats		10,022 ½
Total Grain handled in plant, 37,815 bushels.		

THE ALBERTA SEED GROWERS' ASSOCIATION.

The executive of the Alberta Seed Growers' Association appointed at the time of the annual convention of the association acts in an advisory capacity to the Department of Agriculture in the management of the Government cleaning and grading plant. Meetings of the executive are held from time to time throughout the year. The 1928 executive consisted of: Honorary President,

G. M. Stewart; President, D. H. Bark; Vice-President, A. C. B. Grenville; Secretary-Treasurer and Managing Director, W. J. Stephen; Directors, Major H. G. L. Strange, D. H. Galbraith, and Herman Trelle.

PROVINCIAL SEED BOARD.

The Provincial Seed Board, consisting of G. M. Stewart, Chairman; W. J. Stephen, Secretary; Dr. Robt. Newton and H. G. L. Strange, Directors, functioned during 1928. The members of the board are appointed by the Provincial Minister of Agriculture. The board dealt with matters pertaining to Registered and Extra No. 1 seed. It presented many matters of importance to the registered seed industry of Alberta at the annual meeting of the Canadian Seed Growers' Association held in Quebec in June, 1928.

The board offered suggestions regarding the prize list of the 1929 Provincial Seed Fair, rules and regulations governing field crop competitions and other matters of interest to Alberta seed growers. It can be very properly said that the Alberta Provincial Seed Board safeguards at all times, in a very efficient manner, the seed-growing industry of the Province.

COMMITTEE ON VARIETAL ZONATION.

The committee on varietal zonation met at the time of the Provincial seed fair in Calgary, to discuss matters relative to the work of this committee during the previous year. It was decided that the time was not ripe to publish results of the year's work, as it was felt that data of a sufficiently conclusive nature had not been obtained, and it was decided to continue with varietal tests at representative points throughout the Province. At this meeting reports were received from the following districts conducting varietal tests: Lethbridge, Lacombe, Raymond, Claresholm, Olds, Edmonton, Vermilion, Beaver Lodge, and Scott, Saskatchewan. Mr. Jones of Fort Vermilion stated that the committee could expect a report from his station at the next meeting. Varietal tests are being conducted with different varieties of wheat, oats and barley. It is expected that very valuable data will be available for the public as to the best variety suitable in each district of the Province, within a very few years.

EXPERIMENTS WITH SUPERPHOSPHATE FERTILIZER.

The Field Crops Branch superintended experimental work with superphosphates at different points throughout the Province. This fertilizer was obtained free of charge, from the Trail smelter, British Columbia, through the courtesy of the Canadian Pacific Railway.

The fertilizer was tried out on experimental plots at the Raymond, Claresholm and Olds Schools of Agriculture and at the Experimental Station at Lethbridge. Farmers also made tests on plots from five to ten acres at Raymond, on the Lethbridge Northern, and at Claresholm, Olds, Gleichen, Sedgewick and Edmonton. These latter tests were conducted under the direction of local

Government representatives. The rate of application was from 40 to 100 pounds per acre on wheat and oat crops. It was applied to summerfallow land and to spring plowing. The results were quite varied. In most instances, however, maturity seemed to have been hastened by the application of fertilizer, and in many instances the yield was somewhat increased. The results were sufficiently encouraging to warrant the department's decision to continue further tests with it during 1929.

EXPERIMENTS WITH CHEMICALS FOR THE ERADICATION OF WEEDS.

During the years 1927 and 1928 the Field Crops Branch conducted numerous experiments throughout the Province with various chemicals that are now on the market for the eradication of perennial weeds, such as Sow Thistle, Canada Thistle and Quack Grass. Several of these chemicals are promising in that they appear to be destroying these weeds even to the root system. Before the department can feel justified in making a statement as to the permanent effects of any particular chemical, it will require at least one year more of observation.

Report of the Game Commissioner

(BENJ. LAWTON)

General conditions with respect to all classes of game has been reasonably satisfactory, but not, however, with respect to fur-bearing animals. It is a well known fact that approximately every seven or eight years the fur-producing animals of the carnivorous species practically disappear, this being due largely to the scarcity of rabbits. It is invariably the case that with the scarcity of rabbits, the fox, lynx, and coyote are much reduced in numbers, although they may migrate to some extent. Other fur-bearers are depleted by over-trapping, and it would appear that this cannot be prevented unless some scheme can be adopted which will assure trappers that they will be, to some extent, guaranteed the privilege from year to year of trapping over the same area. This would result in their leaving a sufficient supply of breeding stock to give them good results the following season. It would be to their interest as well to take all necessary precautions to prevent fires being kindled which would endanger the timber on their trapping areas.

Beaver are still exceptionally scarce and the season on these animals should be kept closed for several years. Muskrats are very scarce in that part of the Province lying to the north of the North Saskatchewan river, but to the south of that river they are unusually plentiful. Too much illegal trapping, however, is being carried on, and from some quarters requests have been received asking that an open season be declared. If this is done, it will result in great numbers of trappers from the north of the North Saskatchewan river flocking into more southern areas, and if this should occur, two seasons will reduce the supply of these animals to where it was in 1920 when the close season was proclaimed.

A comparison of the following table with those of previous years, showing fur production for the Province for the season 1927-28 will clearly show the falling off in the number of pelts of the different animals:

ALBERTA FUR PRODUCTION, 1927-1928.

Kind	No. of pelts	Av. Value per pelt.	Total value of pelts.
Badger	15,919	\$20.00	\$318,380.00
Beaver	736	25.00	18,400.00
Wolverine	66	20.00	1,320.00
Squirrel	235,933	.20	47,186.60
Ermine	109,687	1.75	191,952.25
Otter	149	30.00	4,470.00
Wolf—Prairie	20,150	15.00	302,250.00
Wolf—Timber	190	15.00	2,850.00
Lynx	2,851	30.00	85,530.00
Marten	1,288	30.00	38,640.00
Skunk	3,567	2.00	7,134.00
Bear	814	8.00	6,512.00
Fisher	52	60.00	3,120.00
Rabbit	218,246	.10	21,824.60
Fox—Silver Black	1,630	70.00	114,100.00
Fox—Cross	759	50.00	37,950.00
Fox—Red	1,330	30.00	39,900.00

Fox—Kit	250	3.00	750.00
Fox—Blue	25	40.00	1,000.00
Fox—White	14	40.00	560.00
Muskrat	300,015	1.30	390,019.00
Mink	1,708	15.00	25,620.00
Gopher	17,625	.10	1,762.50
Moose	20	5.00	100.00
Caribou	18	5.00	90.00
Deer	22	1.50	33.00
Sheep	55	1.50	82.50
Raccoon	31	5.00	155.00
	<u>933,150</u>		<u>\$1,661,691.50</u>

BIG GAME ANIMALS.

Moose.—The supply of these animals appears to be somewhat less than some years ago, although in some districts they are very plentiful. The past open season, however, was not favorable for the hunter owing to the lack of snow. It is believed, however, that many animals were wounded and that the hunter was unsuccessful in finding them owing to his inability to track them.

Deer.—These animals are much more widely distributed than the moose, and in most districts appear to be holding their own in numbers.

Woodland Caribou.—These animals are still to be found in fair numbers in certain areas only, and while not plentiful, may be in no immediate danger of extermination due to the fact that the areas where they are found are to a great extent inaccessible.

Elk.—In the area between the Pembina and Brazeau rivers where the season is closed on all classes of big game animals, elk are increasing in numbers and are spreading to surrounding territory. A limited number have crossed the Saskatchewan river and are found in the area west of the north end of Buck Lake.

Antelope.—These beautiful animals have for some years been on the increase, but unfortunately during the past winter they have caused considerable damage to grain in the stook, the season being unfavorable and the conditions unusual, since the farmers were unable to thresh their crops in many cases before spring. It might be well to consider some method of allowing the killing of a limited number of these animals, otherwise many of them will eventually die of old age.

GAME BIRDS.

I regret to say that in general the supply of game birds is becoming less each year. It is true that certain species have their cycles and periodically become very scarce; this applies more particularly to birds of the grouse family. There has now been a close season on the prairie chicken (sharp-tailed grouse, pinnated grouse) and partridge (ruffed grouse) for two years. The sharp-tailed grouse are showing a considerable increase in numbers and should be sufficiently plentiful by October, 1929, to justify an open season, and although the native partridge are increasing it is doubtful if the shooting of these should be permitted before 1930.

There has been some improvement in the supply of Hungarian Partridge (European Grey Partridge) in the western half of the

Province during the past year, and they are quite plentiful in the eastern half in the more open country. No change is necessary in connection with the present open season as applied to these birds.

FUR-MARKETING SERVICE.

This service has been carried on for the benefit of trappers and others who chose to avail themselves of the benefits to be derived therefrom. It was undertaken at the request of trappers who were dissatisfied with the prices they had been receiving for pelts which they had sold previously. Many enquiries are received each year as to whether this service is being continued. The results for the season ending June 30, 1928, showed a splendid increase over any previous season. The commission of 3 per cent. deducted from the amounts realized from the sale of shipments has covered the cost of operation. It is believed that eventually this service will become so popular that provision will have to be made for special premises in which to carry on.

DESTRUCTION OF CROWS, MAGPIES, ETC.

The campaign for the destruction of crows, magpies and gophers was continued during the past season, with the result that a great many of these animals and birds were destroyed, the result being as follows:

Crows and Magpies' Eggs.	Crows and Magpies.	Gophers.
48,858	55,941	84,603
TOTAL DESTROYED BY SCHOOL CHILDREN.		
Crows and Magpies' Eggs.	Crows and Magpies.	Gophers.
30,551	28,022	63,858
TOTAL DESTROYED BY ADULTS.		
Crows and Magpies' Eggs.	Crows and Magpies.	Gophers.
18,307	27,919	20,745

PRAIRIE AND FOREST FIRES.

There were no serious forest fires during the past year, but unfortunately there were a great number of prairie fires which caused considerable damage. This was due to the profuse growth of vegetation and to the exceptionally dry weather during the late summer and early fall. Many fires originated along the railway lines, and if this condition is not improved it may be necessary to consider the advisability of making more stringent regulations.

Report of the Poultry Commissioner

(J. H. HARE)

The year 1928 will go down as one showing normal growth and fairly satisfactory returns to the producer. The volume of spring and summer eggs was only slightly greater than that of the year previous, but owing to favorable weather conditions and an increasing interest in poultry, the crop of young stock raised was a good deal in excess of that of 1927, and this has given distributors much more dressed stock to handle.

The turkey crop was 10 to 15 per cent. greater in 1928, with the returns a little less satisfactory. Some cars were sold on the early market at a satisfactory price, but a surplus of American turkeys upset our eastern Christmas markets, so that many sales were made at several cents less per pound than corresponding grades the previous year. However, the clean-up was fairly satisfactory; in fact, the local markets were left comparatively bare and the New Year's demand brought prices up again.

It has been an unusual season for eggs. Eastern dealers have been reluctant to buy western storage stocks until their own were cleaned up. The continuous mild weather of the fall and winter up to the New Year matured the pullets throughout the country and brought many of them into fairly heavy production. In fact, aside from the climatic factor, winter production has been increasing in Alberta, so much so that importations of fresh eggs during the cold months have become almost unnecessary.

One outstanding feature is the steady growth the industry is making and its rapid advancement in economic importance. Fifteen years ago the estimated annual revenue was \$2,250,000. Ten years ago it increased to \$3,500,000. Five years ago it advanced to \$9,000,000, and this past year it increased to \$9,350,000. In substance the figures show that the value of the poultry industry in Alberta has increased 190 per cent. in the past ten years and 340 per cent. in the past fifteen years.

The following tables supply further detail in this connection.

NUMBER AND VALUE OF POULTRY IN ALBERTA.

	Number.	Value.
1911	2,453,117	\$1,357,183.00
1916	3,172,777	1,779,987.00
1921	4,963,565	2,976,660.00
1926	6,127,541	4,971,450.00
1928	6,213,706	6,095,398.00

ESTIMATED PRODUCTION AND VALUE OF FARM EGGS

	Egg-Producing Hens.	Eggs Produced.	Av. Price per doz.	Value.
1924	4,242,284	26,514,275	21c	\$5,037,712.00
1926	4,386,154	28,510,014	24c	6,842,403.00
1928	4,125,000	28,187,500	28c	7,892,500.00

DEPARTMENT OF AGRICULTURE

ESTIMATED PRODUCTION AND VALUE OF FARM POULTRY, 1928

	Value.
Turkeys exported—1,650,000 lbs.	\$ 412,500.00
Turkeys consumed at home—900,000 lbs.	252,000.00
Other poultry exported—1,950,000 lbs.	390,000.00
Other poultry consumed—4,800,000 lbs.	960,000.00
	\$2,014,500.00

EGG EXPORTS.

Egg exports are down about 10 per cent. from 1927. The report of the Senior Egg Inspector has the following figures:

Fresh Extras	2,251 Cases
Fresh Firsts	6,851 "
Fresh Seconds	12,665 "
Storage Firsts	3,054 "
Storage Seconds	6,093 "
Total.....	30,914 Cases
Equivalent to 66 Car-loads.	

CULLING SERVICE.

The officers of the Poultry Branch have done a great deal of flock culling for farmers in various districts. To economize in the matter of time and expense and to extend its usefulness, the service was restricted to districts where groups of farmers made application for it. The work of one officer for ten days in November will illustrate the nature of this work. Application for the service in this instance came through an officer of the local Egg Pool. The work was commenced with a list of six. As the work went forward, others in the district learned of the presence of our representative and made application for the service until 40 flocks were gone over. These 40 farmers had 4,092 birds, an average of 102 birds per farm. Of the 40 flocks, 30 were pure-bred. Ninety per cent. of those keeping pure-bred birds were interested in keeping their flocks pure and breeding as closely as possible to the standard of perfection, consistent with good production, and all of these flocks were gone over by our inspector with a view of taking out unthrifty and poor layers. All birds with standard qualifications were specially marked, so that they might be kept separate from the breeders in the spring or disposed of before the breeding season commenced. Some of the owners had developed a business in hatching eggs and breeding stock, and special pains were taken to assist these in the selection of their breeding stock and other particular work they were doing.

PROVINCIAL APPROVED FLOCKS.

The Poultry Branch is conducting what is known as the Provincial Approved Flock scheme. It is open to anyone keeping poultry for revenue, but it is more especially for farmers. It is essentially a farm flock improvement scheme.

The plan involves trapping for four winter months, from November 1 to the end of February. The purpose of trapping is to identify the best birds to use as breeders. A bird that will lay 50 eggs in 100 consecutive days, during this winter period is designated an "approved" bird, providing also that the eggs average 2 ounces in weight during January and February, and a "certified" bird one that will lay 70 eggs in 100 consecutive days.

We were at first loath to suggest any trapping to farm poultry keepers, because of the extra work involved, but we have been surprised to discover that no objection is taken to the little added work of releasing the birds from the traps and recording the production on the forms we supply. The trapping only lasts four months, and is done at a season when there is some relief from the more arduous farm work. There is another satisfactory result: it has greatly increased the interest taken in poultry on the part of the participants. This has increased their efficiency, and consequently the financial results are more satisfactory.

Another advantage of the work is that it demonstrates the practicability of winter egg production. Aside from the occasional mild season, winter production is very low in this province and prices are correspondingly high. Those who are working with us in this scheme are finding that it is possible to get good winter production in any year notwithstanding unfavorable weather conditions.

Still another feature is the advertising value of Government inspection, of having a flock which has been checked and endorsed by independent officials. There is an increasing demand in Alberta for good breeding stock and prospective buyers are increasingly demanding stock of proven value. There is also an increasing demand for hatching eggs. Several new hatcheries have recently commenced operations in Alberta and these are interested in obtaining eggs that are from Government-approved flocks. Needless to say, better revenue can be obtained from eggs produced if a breeder can sell to such a market.

A further feature is the information and help our inspectors are able to give to those who are caring for the birds. The flocks are of course subject to unannounced inspection. The representative of the poultry branch on the occasion of his visit to an approved flock will take charge of the traps for the day, check the birds for health and standard disqualifications, the eggs for size and color and the accuracy of the records kept. But, aside from these duties, he is there to advise in feeding and management, so as to assist the owner in getting maximum results.

The scheme commenced with twelve flocks in the fall of 1927. Final report for this year showing number of approved and certified birds follows.

FINAL REPORT—APPROVED FLOCK WINTER TEST, 1927-1928.

	Breed	No. in Test	Leg band Nos.	No. Cert.	No App.
1—Mrs. C. W. Drayton, Pickardville.....	B. Rocks	100	1601-1700	2	4
2—J. W. Sidford, Busby	B. Rocks	50	151-200	5	8
3—Mrs. T. Cailes, Onoway.....	B. Orp.	30	451-481	0	10
4—W. N. Paton, Wetaskiwin	W. Wyan.	51	101-150 & 495	1	1
5—Forester & Edgar, Alix	W. Leg.	46	201-246	0	4
6—H. F. S. Greenwood, Nordegg.....	B. Rocks	29	701-729	1	5
7—J. W. Bell, Rockyford	W. Leg.	100	601-700	6	23
8—Osmond Bros., Nightingale	B. Rocks	100	801-900	1	3
9—T. M. Mix, Calgary	W. Leg.	100	115-200 2801-2814	Withdrawn fall colds	
10—Wright & Bond, Irricana	S.C.R.I.R.	32	201-230 H393-H698	0	1
11—E. E. Stafford, Sheerness	B. Orp.	100	251-350	1	13
12—Mrs. J. W. Cooper, Rainier	S.C.R.I.R.	100	2901-3000	16	14
		838		33	90

The following statement shows the members, breeds, number of birds trap-nested and percentage production for the month of December, season 1928-29.

R. E. Blaxall, Magrath	30	B.R.	80%
H. H. Longeway, Calgary	100	W.L.	73%
Nay Bros., Woolford	45	W.L.	70.3%
E. C. Head, Cardiff	43	W.L.	69.1%
Osmond Bros., Nightingale	200	B.R.	61.8%
Geo. A. Duce, Cardston	85	W.L.	60.8%
T. A. Brazil, Nakamun	60	W.L.	60.6%
J. W. Cooper, Rainier	125	R.I.R.	58.2%
F. Aldridge, Cardston	30	B.R.	57.3%
H. F. S. Greenwood, Nordegg.....	45	W.L.	57.2%
Mrs. J. W. Biglands, Lacombe	51	W.W.	57.1%
B. Matkin, Magrath	30	W.L.	56.7%
E. Ehlert, Magrath	30	W.L.	56.2%
C. W. Drayton, Pickardville	76	B.R.	56.1%
Mrs. T. Cailles, Onoway	31	B.O.	54.7%
F. J. Deisman, Gopher Head	96	B.R.	54.5%
Mrs. R. Watson, Lacombe	100	W.L.	54.0%
Ed. Brewett, Mecheche	41	B.R.	53.8%
H. F. S. Greenwood, Nordegg.....	35	B.R.	52.7%
E. S. Savage, Glenwood.....	20	B.R.	49.1%
J. W. Sidford, Busby	108	B.R.	48.6%
H. T. Philpott, Brooks.....	20	W.L.	48.2%
A. Henderson, Red Deer	130	W.L.	48.1%
L. P. Lee, Edmonton	21	B.R.	47.7%
C. N. Nichol, Kipp	30	B.R.	47.5%
F. Gould, Big Valley	50	B.R.	46.7%
E. E. Stafford, Sheerness	80	B.O.	45.3%
E. S. Savage, Glenwood	69	W.L.	44.1%
D. K. Bowman, Gopher Head.....	59	B.R.	41.6%
Mrs. A. Gibb, Dunstable.....	31	B.R.	40.2%
Mrs. A. J. Martin, North Edmonton	75	B.R.	39.9%
Mrs. E. Auls, Rose Lynn	27	R.I.R.	39.7%
Mrs. P. J. Hutchings, Edmonton.....	137	B.R.	39.7%
Mrs. N. Baptist, Tofield.....	39	W.W.	37.3%
Mrs. H. S. Comfort, Red Deer.....	65	W.L.	35.9%
J. R. Weston, Red Deer.....	33	W.L.	35.7%
Mrs. W. J. Bell, Baintree.....	120	W.L.	35.7%
Dr. Phillips, Penhold	45	W.L.	33.7%
Mrs. M. E. Graham, Riverton.....	68	B.R.	33.5%
W. H. Sanders, Grainger.....	244	W.L.	31%
W. N. Paton, Wetaskiwin.....	50	W.W.	30.5%
G. W. Brown, Big Valley.....	76	W.L.	29.9%
Mrs. Jas. Burns, Halliday.....	33	W.W.	27.1%
Red Deer Poultry Plant, Red Deer.....	49	W.L.	26.3%
H. H. Longeway, Calgary	25	B.L.	24.3%
Mrs. G. L. Stringam, Glenwoodville.....	35	B.R.	23.4%
P. A. Switzer, Lacombe.....	29	B.R.	23%
G. W. McCulley, Sheerness.....	8	C.	19.3%
C. Aspland, Glenwoodville	20	R.I.R.	18.7%
Mrs. M. Stanley, Landonville.....	29	B.R.	16%
Wright & Bond, Irricana.....	16	W.L.	14.1%
Wright & Bond, Irricana.....	37	R.I.R.	4.1%

ROYAL SHOW, TORONTO.

The 1928 shipment to the Royal Show at Toronto consisted of 61 birds contributed by eleven breeders. They won twenty firsts, five seconds, seven thirds, one fourth, one fifth, one sixth, one seventh, one twelfth, and three special prizes. Practically one-third of the exhibit was placed under first prize ribbons, com-

peting against the largest classes of exhibition poultry ever shown in Canada, there being about 8,000 entries on exhibition. The results demonstrate the high quality of poultry now being raised in Alberta, and more than justifies the breeders and the department in the preparation and shipment of the exhibit.

The following is a partial list of the winnings:

- William Miller, Edmonton, Black Minorcas: 1st cockerel.
- S. H. Surtees, Edmonton, Black Minorcas: 3rd cockerel, 1st pullet.
- T. W. Gordon, Edmonton, White Wyandotte Bants: 1st cock, 1st hen.
Black Wyandotte Bants: 3rd hen.
- Dr. J. Wilkinson, Edmonton, Partridge Albertans: 1st cock, 1st hen, 1st cockerel, 1st and 3rd pullet.
- Dr. S. W. D. Frith, Edmonton, Buff Orpingtons: 2nd cockerel; 1st, 3rd and 5th pullet. Special for best shaped Buff Orpington male and female and best Buff Orpington female.
- Rowland Ness, De Winton, Silver Grey Dorkings.
- Gilbert N. Young & Sons, De Winton, Rose Comb White Leghorns: 1st cock; 1st, 2nd and 3rd hen; 1st cockerel, 1st and 2nd pullet, best 200-egg hen, best 150-egg hen. Single Comb White Leghorn: Best 200-egg hen, best 150-egg hen.
- Jas. Reid, Calgary, Single Comb Rhode Island Reds: 7th pullet.
- Jas. S. Smith, Calgary, Single Comb Rhode Island Reds: 6th pullet.
Rose Comb Rhode Island Reds: 3rd and 4th cockerels.
- F. S. Wetherall, Calgary, Single Comb White Leghorns; 12th cockerel. Single Comb Black Leghorns: 1st cock, 2nd and 3rd cockerel, 2nd pullet, 1st old pen.
- S. P. Barth, Calgary, White Wyandottes.

PROVINCIAL POULTRY PLANT.

At the present time some 1,400 birds are being carried in the breeding plant at Oliver. Of this number 950 are pullets, all of which are being trapped. We have this year what appears to be the best flock of young stock the plant has had since its beginning at Oliver. Production has been good throughout the year, especially among the pullets. One pen of 100 Barred Rocks in December produced at the rate of 54 per cent. and a pen of 100 White Leghorns 62 per cent. Electric lights were installed in the pullet houses and the birds were given a twelve-hour day through November and December. This accounts to some extent for the increased winter production this year.

The better housing of poultry is a problem we have been working on. Generally speaking, the various types found satisfactory in other parts of the Dominion have not been satisfactory here. We have found that if the temperature inside the house is allowed to go down to zero and lower the birds will suffer much discomfort and production, to some extent, will be cut off. Some are overcoming the difficulty by using artificial heat. We have improved a number of our houses by lining the walls and roofs in the inside and filling the intervening space with shavings.

The mammoth incubator has continued to give good results. In addition to hatching approximately 3,000 chicks for the farm, 197 outside orders were filled, consisting of 4,915 Barred Rocks, 1,408 White Wyandottes and 5,602 White Leghorns, making a total of 11,925 chicks.

Special disease investigational work has been undertaken this year, involving 300 birds. This work is under the direction of the Provincial Veterinarian.

The entire farm flock was tested for bacillary white diarrhea in November. The flock at the time of the test consisted of 400 Barred Rocks, 270 White Wyandottes and 637 White Leghorns. The results show the following infected or suspicious birds: 17 Barred Rocks (4.2 per cent.), 56 White Wyandottes (20.7 per cent.), 44 White Leghorns (6.9 per cent.). The reactors and suspicious birds will be eliminated. In the month of September the Provincial Veterinarian tested 400 of our young birds for tuberculosis and found no reactors.



Three-year-old Clydesdale filly, "Corsewall Alice"—owned by Alberta Department of Agriculture. Placed second in class of twenty-four—Toronto Royal Winter Fair, 1928.

Report of Superintendent of Fairs

(S. G. CARLYLE)

The reports of the fairs for 1928 are much more encouraging than they have been for some years past. This has, no doubt, been due to the better financial position of the farmer and also to the increased prices of live stock. Our fairs at the present time are principally live stock shows, though at some of the fairs there have been very creditable showings of grains, grasses and vegetables, and there is apparently a great interest taken in the products of the farm other than live stock, than has previously existed.

At the majority of fairs there was a decided improvement in the quality of the live stock, but there were far too few animals shown in most of the classes to make really good competition. Boys and girls' classes are featuring more largely every year, and at one fair in particular there was a larger exhibit and more interest taken in these classes than in all the rest of the exhibits.

It is a question, however, if the money expended in grants and the sending of judges to a number of our amateur fairs, is as wisely spent as it might be, and if it is in the best interests of the improvement of live stock.

The larger fairs and all the Class B fairs were very successful this year, financially, and also in an educational way, as the majority of the classes were filled with animals which were well fitted and of good quality. The farmers are taking a keener interest in the judging each year, as is shown by the numbers around the ring-side when the judging is in progress.

At the fairs convention which was held in Edmonton, February 7 to 9, a total of 68 societies were allotted fair dates. Five of these were later cancelled by the societies at their own request, leaving 63 fairs held, which number includes the B Class fairs, whereas in 1927 the number of fairs held was 65. The charter of the Onoway Agricultural Society has been cancelled at its own request, and no new societies were formed during the year.

In comparing the secretaries' reports of the various fairs of 1928 with the previous years, we find that twenty-two show improvement, twenty-one are about the same and six are below the average of preceding years. Nine societies reported that the fairs of 1928 were the best held in the history of their societies.

The B Class fairs had a very successful year in general. Reports from secretaries, judges and other sources, show that while there was a decrease in many cases as to the number of live stock exhibited, there was a marked improvement in the quality, which is very gratifying as to the future of the live stock industry in the Province. There was a marked improvement noted in the quality and number of hall exhibits.

It was again decided by the association that a number of the poorer fairs should be visited by members of the executive. This decision was carried out and was appreciated by the societies visited.

It is estimated that 391,815 persons were in attendance at the Calgary and Edmonton fairs, compared with 323,078 in 1927, an increase of 68,738. The attendance at the B, C, D and E Class fairs is estimated at 146,153 compared with 134,000, an increase of 12,153.

Nineteen field crop competitions, 12 seed fairs, 5 plowing matches, 2 good farms competitions, 9 poultry shows and 11 horticultural shows were held during the year. The larger proportion of the field crops competitions were sponsored by various associations and service clubs throughout the Province.

It would appear at the present time that in order to hold a really successful fair, boys and girls' classes should be featured and judging competitions held, and also that the agricultural society should do everything in its power to encourage and assist in organizing boys and girls' club work in live stock, as we believe that the future of successful farming in our Province depends largely upon the training given to the rising generation in the intelligent breeding and care of live stock.

GRANTS PAID FOR 1927 FAIRS.

		Number
A Class Fairs	\$ 6,000.00	2
B Class Fairs	12,734.02	6
C Class Fairs	4,315.39	5
D Class Fairs	12,570.39	23
E Class Fairs	11,688.73	28
	\$47,308.53	
Field Crop Competitions	525.00	7
Sugar Beet Competitions	143.75	4
Poultry Shows	3,906.55	7
Horticultural Shows	124.75	2
Seed Fairs	676.50	10
Plowing Matches	284.75	4
Good Farms	53.75	3
Corn Shows	37.50	1
	\$53,061.08	

Report of the Provincial Veterinarian

(DR. P. R. TALBOT)

The following comprises the work of the Provincial Veterinarian's Branch for the year 1928:

1. General supervision of the health of live stock throughout the Province, and also of the live stock at the various Government institutions.
2. The prevention and eradication of diseases of live stock in the Province, that do not come under the Animal Contagious Diseases Act.
3. Lecturing on diseases of live stock at the different Schools of Agriculture, and on Veterinary Science at the University of Alberta.
4. The supervision of experiments being carried out at the various Government institutions, in conjunction with the University of Alberta, for the following diseases:
 - (a) Bovine infectious abortion.
 - (b) Bacillary white diarrhea.
 - (c) Swine parasites.
 - (d) Bovine tuberculosis.
 - (e) Avian tuberculosis.

INVESTIGATIONAL WORK.

A considerable number of diseases were investigated during the past year. The reports came from districts where there was no veterinary surgeon, or in instances where the local veterinarian called in the Provincial Veterinarian for consultation. The following is a list of the diseases investigated:

In horses—Influenza.
In cattle—Hemorrhagic septicemia and weed-poisoning.
In sheep—Digestive troubles and weed-poisoning.
In swine—Parasites and pneumonia.

One disease investigated and not mentioned above which is worthy of special attention, is the condition known as "jiggers" in horses. The report came from ranches in the Hussar and Jenner districts, and after making a careful survey of the territory affected, we were inclined to believe that there was one of three factors to be considered as causing the trouble, namely:

1. Parasitic infestation.
2. Consumption of considerable quantities of ergot.
3. Certain plants growing in abundance in that part of the country.

Experiments are now under way to find out definitely to which cause the trouble may be attributed. It is our intention to treat horses in these different sections with some parasiticide, in order to determine if the elimination of the parasite (if present) would do away with the trouble. The plants referred to above are being analyzed at the laboratory of the University of Alberta, to find out if there is any poison present.

EXPERIMENTAL WORK.

Bovine Infectious Abortion.

The following is a brief description of the experiments now under way in connection with the above disease.

At the suggestion of the various Animal Husbandmen present at a meeting held in Edmonton in April last, a number of heifer calves were secured. They gave a negative reaction to the tuberculin test, and were inoculated with abortion vaccine. It was later suggested that the animals be submitted to these tests at regular intervals and that they were to be bred and inoculated with a virulent organism. It was thought that following such a programme, the efficiency of abortion vaccine would be established.

GROUP 1—Six grade heifer calves were given the agglutination test shortly after birth. They were negative and were inoculated with an abortion vaccine. These heifers are to be bred at two years of age, and four months later, to be inoculated with a virulent organism (*Bacillus Abortus*). No special care or isolation will be necessary until they are injected with the virulent organism, when of course, they will have to be isolated to prevent infection among the other cattle.

GROUP 2—We think it would be desirable to have, in addition to the above group, a certain number of grade heifer calves, to be used as controls in this experiment. They will have to be inoculated with a virulent organism, the same as Group 1.

The following will also be necessary in connection with this experiment:

1. Agglutination test to be applied at different intervals until time of breeding, to obviate the possibility of infection during this period.
2. The bull used for the breeding of these animals to be submitted to the agglutination test also.

The work in connection with the blood test is being done at the University laboratory, and it is anticipated that valuable information will be obtained relating to abortion vaccine.

Bacillary White Diarrhea.

Experimental work along this line was started as the result of three factors, namely:

1. Wherever poultry is raised, the greatest problem confronting the poultryman is that of bacillary white diarrhea.
2. This disease is said to be giving poultrymen in other provinces considerable trouble, and during the past three seasons large numbers of baby chicks have been brought in from points outside Alberta.
3. Several cases have been brought to our attention of large losses in flocks of poultry in Alberta, that seemed likely to be traced to this trouble.

Arrangements were accordingly made to carry out agglutination tests, at the University of Alberta laboratory, and up to the present

52 flocks have been treated, composed of 8,764 birds. These tests have been confined entirely to flocks under Government supervision, and they are considered as merely the first step in determining to what extent the disease is prevalent in Alberta.

Swine Parasites.

Experiments were carried out at Vermilion, Olds, Claresholm, and Raymond, to determine the extent to which animals were affected, and also as to the best means of combating parasites, should they be widely distributed. Various tests were made in connection with the most satisfactory treatments, and we intend to carry this work to a point where a more definite statement can be made.

After completing observations at the above-mentioned points, we followed a large number of hogs through the various packing plants, and have come to the conclusion that animals are somewhat extensively affected with a round-worm, in the vicinity of Calgary and Edmonton especially. But the swine in outlying areas are still apparently comparatively free from infestation. The investigations made would indicate that swine parasites are not widely distributed, but are confined principally to the hogs in the older and more thickly populated districts.

Bovine Tuberculosis.

Much experimental work has been conducted in Alberta under the supervision of the National Research Council of Canada, the chairman of which is Dr. H. M. Tory. This work is not included in the report. There are, however, a considerable number of experiments under way on this disease under our own supervision, separate from the above-mentioned work. One of these comprises a large number of animals that have been vaccinated with Raw's vaccine. They are breeding cattle and will be kept under observation to determine if immunity has been increased.

One experiment consists of 138 calves vaccinated with Calmette vaccine. Seventy-seven of these have been inoculated twice and 49 three times.

Another experiment, made up of 150 animals, has been under close observation since 1924. We expect to have all animals in this group inoculated with Calmette vaccine within the next two years. So far, no trace of tuberculosis has been found on any post-mortem examination, when slaughter was necessary, and it is considered one of the healthiest and highest producing herds in Alberta.

Avian Tuberculosis.

With the aid of Dr. A. C. Rankin, Dean of the Medical College, University of Alberta, and his assistants at the Provincial laboratory, we have under way an experiment with Avian tuberculosis, which is rather unique. It consists of a large number of birds, 50 of which are vaccinated against tuberculosis and an equal number used as controls. We have endeavored by the administration of virulent avian tubercle bacilli to determine if any protection has been given by vaccination. If it could be possible to give young

chickens immunity when they are a few days old, it would be a wonderful step in preventing avian tuberculosis. This is the first experiment of its kind tried out in Canada that we are aware of, and needless to say, the results are being watched with a great deal of interest. The final results will be announced when the experiment is completed.

STALLION ENROLMENT.

The enrolment of stallions is practically the same as in 1927. It will be noticed that Percherons are more numerous than any other breed. There have been many inquiries regarding information as to the good stallions in Alberta. Judging from reports and information obtained elsewhere, we are of the opinion that high-class stallions are gradually becoming scarcer every year, and that before long a serious condition will develop, unless there is a decided change.

We believe the Thoroughbred stallion has held its own compared to other breeds. Much of the credit of this is due to the energy of Mr. E. D. Adams, Secretary of the Thoroughbred Horse Breeder's Association, Calgary, who has been untiring in his efforts to stimulate light-horse breeding in Alberta. The work of selection and inspection has been efficiently handled by Mr. Thomas Cronie, Calgary. Even though the horses to be inspected were widely scattered, and at times the condition of the roads made travelling very difficult, Mr. Cronie was able to complete the year's work and to report 131 inspections for 1928. The following is the comparison between the enrolment for 1927 and 1928, according to breeds:

	1927.	1928.
Percheron	233	216
Clydesdale	182	165
Belgian	78	79
Shire	14	24
Standard Bred	3	6
Suffolk	5	5
Thoroughbred	16	14
American Saddle	1	1
Jack	3	2
Hackney	1	1
	536	513

Report of the Provincial Farms

(DONALD DOUGLAS, *Director*)

The crop of 1928 on the Provincial Farms in some cases was not as heavy in yield as in the previous year, especially the oat crop, which was partially hailed on several of our farms, thus causing a decided reduction in the estimated yield.

The season opened up early, conditions being favorable for the operation of the land, and enough moisture being present in the soil to give good germination. As a result, the growth of grasses and grains were very rapid. However, the excess moisture during the latter part of the season prevented the grain from ripening as early as it should, and the heavy frost during the latter part of August caused considerable damage, especially to the wheat and oat crops.

LIVE STOCK.

All of our flocks and herds have done well during the past year, making considerable increases, and there has been very little sickness. On several of our farms new stock has been added to that on hand.

CLARESHOLM.

For Claresholm farm we purchased three imported Ayrshires: one bull and two heifers. The bull, "South Craig Prince John" is to replace our present herd sire. He was first as a junior calf at Toronto and is also on the Advanced Register as a Class "A" bull, and the heifers are of exceptionally high-class breeding. So with the addition of these to our present stock, we hope to build up one of the best herds in the Province.

Two of our mature cows have completed their Record of Performance tests for the last lactation period, "Sylvancrest Rosita" with 14,554 lbs. of milk in 365 days, and "Christmas Gift" with 14,960 lbs. of milk in 365 days; also a number of two-year-old heifers have records of from 7,600 to 8,200 lbs. of milk in 305 days.

OLIVER.

At the Toronto Royal Show we also purchased four purebred Guernseys: two cows, one heifer, and one bull. The bull was first as a junior calf and will be used as a herd sire; one of the cows was reserve champion female of the breed at this show. These are located at the Oliver farm in addition to our present herd of high-class Holsteins, of which most have made very good records during the past year. The ten-year-old cow, "Hengerveld Pearl Nophere 5th", produced 23,667 lbs. of milk in 360 days, and "Sylvia Hengerveld Pearl" 18,533 lbs. of milk in 360 days. The other cows on test also made very good records in the 305 and 365 day classes.



Left—Junior Hereford calf; right—Senior Hereford calf. Winners respectively of third and second prizes, Toronto Royal Winter Fair, 1928. Bred and exhibited by Alberta Department of Agriculture.

VERMILION.

At Vermilion farm, where our herd of dual purpose Shorthorns is kept, we have had some very good records during the past year, some mature cows making splendid records of performance tests, and a number of very promising young heifers showing up very well. With the purchase of "Neralcam Dominator" as a herd sire, we hope to improve our herd in production of milk, and yet to retain a good beef body on the individual cow. Milk production for this type of cow should average from 9,000 to 12,000 pounds of milk in 365 days.

OLDS.

At Olds farm, where we have a herd of about 35 Shorthorns of the beef type, we have some of the best families of the breed that can be obtained, and with the purchase of two imported bulls as herd sires, one Augusta-bred and the other Lavender-bred, we hope to be able to improve our herd still further.

ROYAL WINTER FAIR EXHIBITS.

Three horses and nine fat steers were exhibited by the department at the Toronto Royal Fair. Two of our Clydesdale geldings stood third and fourth in a strongly competed class, and our Clydesdale filly "Corsewall Alice" won second in a strong class of three-year-olds.

Our exhibit of fat steers won a number of prizes. In the various classes we won one first, one second, two thirds, two fourths, and third for a group of three steers. As most of our exhibit was composed of senior or junior calves it was rather difficult to put enough finish on the younger calves.

Report of the Publicity Commissioner

(D. A. McCANNEL)

The work of the Publicity Branch has been carried on during 1928 in a manner very similar to that of previous years, except that the field for activities of a general public nature has been steadily expanding and correspondingly greater results have been achieved.

An increasing demand for information on the various resources of the Province has been evident from investors and financial houses and from prospective settlers in all parts of the world. Such information has been given wide circulation through articles published in many Canadian, American and British papers and publications, and as a result of these, the number of enquiries has been still further increased. Assistance was given during the year in the entertainment of a number of prominent bodies and distinguished visitors who were supplied with informative material dealing with Alberta, of which good use was subsequently made in articles and addresses.

A number of writers and lecturers have also been furnished with similar material in the form of articles and photographs. In addition to the free publicity secured through the co-operation of the newspapers, both in and out of the Province, a considerable amount of paid advertising has been carried with very favorable results.

An increasing tendency has been shown by the weekly newspapers of the Province and by numerous outside publications, to reproduce much of the material included in the News Bulletin issued weekly from this office. As this bulletin is now sent to some 350 persons and news agencies, a wide and regular circulation of items dealing with activities within the Province has been secured. Keen interest has also been shown in the fortnightly crop reports issued during the growing season, this form of information being in considerable demand by banks and other financial and business institutions.

Extensive work has been done during the year by the statistical section of this branch under the direction of Mr. H. P. Brownlee. Working in close co-operation with the Dominion Bureau of Statistics, much valuable information regarding agricultural and other forms of production has been recorded. The value of such statistical material has been increased during the past two years by using the seventeen census divisions in the Province as units, instead of the eight crop districts formerly used, thus making the information more accurate as applied to any given locality. Further work has been done on the compilation of a statistical year book, which will include information on agricultural development and various other phases of activity in the Province, and this is now ready for publication. Reprints have also been made of a number

of agricultural bulletins, for which there is a great demand from farmers throughout the Province.

During the year a total of some 7,500 threshers' licenses were sent out from this office, an increase of 1,000 over the previous year. The returns supplied to the department by these threshermen at the end of the season are invaluable as a means of arriving at an estimate of the yield of the various grain crops. I would recommend that some means be devised of impressing threshermen with the necessity of supplying the department with this information, as at the present time only slightly more than fifty per cent. of the registered machine owners have complied with this regulation.

Exhibits of the agricultural products and natural resources of the Province have attracted a great deal of attention during the year. In addition to appearing at the Canadian National Exhibition, and at the Provincial Seed Fair, Alberta exhibits were shown during the months of August and September at eleven state and county fairs in the western central United States. Two exhibit units were shown, one in charge of W. D. Morrison and H. F. Cruickshank and the other in charge of Frank Peterson and N. E. Alexander, all of whom gave splendid service. As a result of a personal visit to each of the American fairs at which the exhibits appeared, I am convinced that the benefits in increased immigration of a very desirable type of settler to Alberta, and the favorable attention attracted to the Province, fully warrant the expenditure of time and money made in this form of work. The interest aroused in Alberta by this means is being followed up through active co-operation with the Canadian Government agents in various centres in the United States, by correspondence and by advertising in a number of American papers.

Special mention may be made of the great number of inquiries received during the year for homesteads and farm lands in the Province. As in 1927, a great many of these refer particularly to the Peace River country, and indicate the tremendous attraction this northern empire has for prospective settlers. Included in the inquiries dealt with have been hundreds of letters from the eastern provinces of the Dominion, and from all sections of the United States, as well as a great many from the British Isles and from a number of European countries. This office has actively co-operated with Hon. Herbert Greenfield, Agent General for Alberta in London, in his efforts to encourage emigration from Great Britain to this Province, and with the Dominion Land Settlement Board through whose courteous assistance many settlers have been placed satisfactorily.

A large number of copies of the Alberta booklet were distributed during the year, as well as maps of the Province, of which a reprint has been published. These, with a newly issued road map, have been widely circulated among tourist bureaus and similar organizations both inside and outside of the Province.

The motion picture bureau operated under the direction of this branch, with Mr. Foley in charge, continues to play an important part in the educational and publicity work of the department. Extensive use has been made during the year of the films and

lantern slides maintained by this service, and material has been supplied for a number of lectures on various topics. A considerable footage of motion picture film has been taken during the season at a marked saving in expense to the department. Further work along this line should be undertaken during the coming year to replace material destroyed by the fire which occurred in the Old Legislative Buildings.

Assistance was given by this branch in the campaign to encourage the use of better quality seed grain, and in the action taken by the department in curbing the activities of a company promoting the sale of an inferior type of hogs in sections of the Province.

Excellent samples of sheaf grains and grasses have been collected during the present season by Mr. Frank Peterson, who has been in charge of this work for the department for many years. These will make a valuable contribution to the exhibits, depicting the agricultural wealth of the Province, which will be shown in 1929.

Report of the Women's Home Bureau

(JESSIE C. MACMILLAN, *Director*)

During the year 1928 this branch has again changed its name and is now known as "The Alberta Women's Bureau Branch." For some time it has been felt that the work of the branch, to have full scope, should be on the widest possible basis, so that it could deal with conditions specially affecting women and children, and other work which it is considered it should undertake.

After the new Act was passed bringing the Bureau into being, the Minister of Agriculture gave instructions for the calling together of the Provincial representatives of various women's organizations, and the following is a brief summary of their recommendations.

The formation of local "bureau committees" in connection with the inauguration of The Alberta Women's Bureau Act, legislation which was enacted at the last session of the Legislature, was recommended to the Department of Agriculture by the conference of heads of women's organizations of the Province. These local bureau committees, which will be composed of presidents of existing organizations in each locality, will be the means of stimulating interest in the Women's Bureau and of centralizing all community services received from it. The underlying motive of the bureau is the co-ordination of all extension services of the bureau to women and women's organizations in the Province.

The conference placed itself on record in favor of the services of the Alberta Women's Bureau being non-sectarian and non-partisan, and recognizing that ultimately these services should be rendered exclusively on a community basis, recommended that wherever feasible, the work of the bureau should be co-ordinated by the formation in each locality of a "bureau committee," composed of presidents or their representatives of existing organizations, this committee to be a means of communication between the Government Bureau and those desiring extension service in the locality; but that these services may also be available to individual organizations, and also recommended to the department "that an advisory committee be formed consisting of presidents or representatives of Provincial organizations of women, to be available for consultation with the department."

That it would be desirable that groups should be formed in any community where there is no existing organization for the purpose of extending these services, was also urged, and the Department of Agriculture was asked for all purposes of the Act to make the services of Miss Macmillan, Director of the Women's Bureau Branch, available to the public.

Those present at the conference were:

Mrs. O. C. Edwards, Provincial Vice-President of National Council of Women, Macleod.
 Mrs. Wellington Huyck, Strome, Mrs. D. R. McIvor, Stettler, representing Alberta Women's Institutes.
 Mrs. R. B. Gunn, Lloydminster, Mrs. F. E. Wyman, Baintree, representing United Farm Women of Alberta.
 Mrs. Wm. Carson, Calgary, Mrs. D. T. Bell, Edmonton, representing Women's Labour Movement.
 Mrs. R. C. Marshall, Edmonton, Mrs. Duncan Smith, Edmonton, representing Imperial Order, Daughters of the Empire.

It is hoped that those interested in adult educational work will realize the importance of the service being given to all women, whether they belong to organizations or not. Such service can only be given by a community forming a local bureau committee, composed of representatives from local organizations and also with the necessary number of representatives from the free lance section of the women.

During 1928 demonstration lectures and short courses were given to the Women's Institutes, United Farm Women of Alberta and a few clubs belonging to other organizations. Owing to the lack of well organized effort by communities, many of our difficulties continue with us. Under the present system only one type of work can be given during the year in one place. If there were a central bureau giving a sufficiently large class in several subjects, a better service could be inaugurated.

The following subjects have been demonstrated during 1928: Foods and their functions; cooking, care and preparation of foods; household administration in its various branches; sewing; millinery; basketry; raffia work.

The Department of Health has taken over the teaching of child welfare, home nursing and treatment in emergency.

The arrangements made for carrying on this work are as follows: The Department of Agriculture provides the lecturer or demonstrator and pays her travelling expense and sustenance allowance. The local organizations undertake to advertise the lecture, demonstration-lecture or short course. They provide the place of meeting and some of the equipment, where equipment is required.

The Alberta Women's Bureau work was carried on throughout the year, the greater part being done during the summer months.

No. of sewing courses given	100
No. of demonstration lectures	5
Total attendance	6,000
Average attendance	24
No. of millinery classes	24
No. of demonstration lectures	0
Total attendance	1,222
Average attendance	16
No. basketry and raffia courses	74
No. of demonstration lectures	2
Total attendance	5,242
Average attendance	28
No. of foods, cooking and household administration short courses....	40
No. of demonstration lectures	12
Total attendance	1,244
Average attendance	20

Total attendance all short courses	13,708
Number of single demonstration-lectures	19
Total attendance	700
No. of lectures given	30
Total attendance at lectures	1,000
Total attendance at short courses, lectures and demonstrations....	15,408
Number of places visited	176

Requests were received in increased numbers for short courses in food work, cooking and household administration. An interest was shown in interior decoration, and appreciation of the work was expressed.

There is a constant demand for courses in sewing and dress-making. These subjects are fundamentals in domestic science and are sometimes taken for granted, but we constantly receive letters of appreciation on the work that our demonstrators are doing. A number of millinery courses were arranged for and greatly enjoyed. Some courses were put on in flower-making and were very successful. The demand for basketry courses is on the increase. Organizations that have had courses for two, three or four years are making larger pieces of furniture, based on the primary work they have done. Fibre work is under consideration and may well be taken up by those with the necessary foundation and training in basketry work. Raffia work has been carried on in conjunction with basketry, and in some cases as a separate subject.

TRAVELLING LIBRARIES AND LOAN COLLECTION.

No part of the work of the branch gives a greater return for the money expended than the library and loan collection. Information is kept up-to-date from a supply of magazines, bulletins and special articles. Active interest is being shown in community singing, artistic development and dramatic effort. A large supply of plays is in constant circulation. Material dealing with the beautifying of the home, arts and crafts and handicrafts is in increasing demand. The whole tendency of the work is to assist in the development of greater skill in the work of the individual.

Travelling libraries are always in demand. Isolated districts have the first call on these, as it is felt that people within reach of books are not in such urgent need of the service.

WOMEN'S INSTITUTES.

The work of the organization was carried on in conjunction with the department until June 30, when an adjustment of the arrangement between the Government and the institutes took place. A graduated reconstruction fund was provided by the Government to be paid to the Provincial advisory board of the Women's Institutes, over a period of five years, the first payment being made on August 1st. The organization has its own business headquarters in Edmonton, and the work is being carried on with vigour and efficiency.

ALBERTA WOMEN'S BUREAU DISTRICT WORKER.

A worker was appointed in August of this year to work amongst new Canadians in the Vegreville district. This is the first appointment under the new Act, and the best method of approaching the women was carefully surveyed. Miss Romanchych went out with

the District Agriculturists, and through them got to know the people. Later she was one of a judging team in school fair work when she met a number of children as well as others interested in the movement. Miss Romanchych visited a number of schools, and at the request of two teachers formed classes and taught sewing.

It is found that the women lack, to a great extent, interests outside their own house and family. It is difficult to interest them in making any organized effort, and it is necessary to visit them and talk to them individually. "It is rather hard to interest the older folks, because some of them are too happy in their satisfaction at what they have achieved in this new country, others feel that they are too old to take interest in new things, or still others who lack any interest." At community functions it is possible to give talks, to help with menus and to make plans with them for gatherings, sales of work or other things in their district.

Appreciation has been expressed by people in the district of the effort the department is making to assist the women and girls. It is hoped that through sustained effort and work carried on quietly and steadily, wholesome, happy and well organized community life will be encouraged and developed.

ADVISORY COMMITTEE ON WOMEN'S IMMIGRATION.

The women of the province are becoming keenly alive to the importance of the question of immigration. In September the advisory committee was called to attend a conference with Lord Lovat, when various immigration schemes were considered, and it is interesting to note that those finally approved were accepted at Ottawa, and have been adopted by the British Government.

Lord Lovat stressed the importance of blanket nomination in connection with women's immigration. He considered that if women could be nominated in small blocks, not exceeding twenty-five in number, and a central organization be responsible for the placing and after care of these women, it would be a better way than personal nomination, as that is such a lengthy process.

Efforts continue to be made to keep in touch with departments, organizations and societies whose work coincides with ours. As chairman of the advisory committee on women's immigration and the committee which met to consult on the administration of the Alberta Women's Bureau Act, I wish to thank the various organizations for sending us members of the committee who were well able to represent their societies in a capable manner, and who gave every assistance in the work they were asked to do.

Reports of the District Agriculturists

REPORT OF M. L. FRENG, DISTRICT AGRICULTURIST, LETHBRIDGE.



Threshing scene near the foothills of the Rockies, southern Alberta.

During the years 1927 and 1928 this part of the Province enjoyed an unusual amount of rainfall, and as a consequence there has been remarkable progress throughout rural districts and towns in the south-western part of the Province. The results of the good crop yields will liquidate many of the old debts and bring about happier conditions in a great many farm homes.

We regret, however, that in some of our districts the very bright crop prospects did not turn out as anticipated during the year 1928 due to the fact that large areas were completely hailed out and crops in other districts were seriously damaged by the early August frost.

Reviewing the crop conditions of last season, it will be recalled that about 40 per cent. of the 1927 crop was not threshed until the spring of 1928, due to the heavy precipitation in the fall and a very heavy snowfall in November. However, this left us with an abundance of reserve moisture. Spring conditions were ideal for getting the crop threshed, and owing to the fine moisture conditions the acreage seeded to crop was naturally increased. Most of the farms in the dry areas were also seeded. The use of the bigger horse outfits and the greatly increased purchase of tractors enabled the farmers to put in the 1928 crop in record time. The month of May turned out to be the driest on record, with the result that grain seeded after the middle of that month did not germinate until the June rains commenced. There was sufficient moisture

throughout the balance of the season, but the delay in germination during May resulted in considerable losses from frost in some sections. Fortunately the harvest and threshing seasons were ideal. In spite of the many anxious times the total yield will be above that of last year. The average grade is, however, somewhat lower.

The prairie grass was the best in years and live stock went into the winter in splendid condition. Live stock shipments from this district are gradually increasing from year to year.

Southern Alberta beekeepers had a record year, despite having a low flow during June due to wet weather. It is estimated that about 200 tons of honey were produced.

As in previous years, during 1928 this branch assisted with general farm problems wherever possible throughout our district. Numerous requests were received from a wide area. A large number of the difficulties experienced a few years ago have, to a certain extent, been solved. The serious soil-drifting trouble has been checked on a good many farms by strip farming. The width of the strips varies according to particular conditions. Community co-operation along this line is necessary. Earlier and better summer-fallowing is being practised and more attention is being paid to better seed. Marquis is the standard variety and if kept pure is the best variety for the Lethbridge district from the standpoint of yield and milling quality, and there is less danger of shelling. Towards the foothill district there is no doubt that an earlier variety is necessary, and in such districts Garnet wheat is gaining popularity.

Considerable attention is being given to forage crops, and for the dry districts permanent grasses such as Brome grass and Western Rye have proven the most successful. The biennial sweet clover is gaining popularity and more farmers are seeding this crop from year to year.

During the last couple of wet seasons the acreage of corn has dropped considerably. However, there are fully as many farmers growing corn on a small scale. By growing the early maturing strains a certain amount of corn can be matured nearly every year. It acts as a cleaning crop and also furnishes a great deal of valuable fodder as well as some matured corn for seed. Unfortunately this season a great many of our districts were badly hit by the frost in August, and this prevented the corn from maturing. For this reason the Provincial Corn Show, which was to have been held at Lethbridge in the fall of 1928, had to be cancelled. It is hoped that a sufficient amount of good seed corn will be available for farmers who wish to grow corn in the season of 1929, and we trust there will be a splendid corn show put on at Lethbridge in the fall of this year.

Owing to the fact that the majority of land surrounding Lethbridge is irrigated, the most of our time has been spent in connection with irrigation problems. Mr. Chas. Giffen, assistant agriculturist here, has devoted nearly his entire time to assisting settlers with irrigation problems in the Lethbridge Northern district.

We have assisted in placing a great many farm flocks of sheep throughout the country, and we believe that a farm flock on the

irrigated farm is very important from the standpoint of cleaning up the farms and the waste places, and at the same time returning a very good revenue.

Assistance was given in laying out a good many farms from the standpoint of following rotations and live stock farming. However, progress along permanent lines depends on the financial condition of the settlers, but there has been marked progress along this line throughout the irrigation districts in southern Alberta.

Sugar beet acreage is on the increase, especially in the Barnwell and Taber districts. There were some splendid returns from beets this season, and fortunately the harvesting conditions were ideal. Throughout the Lethbridge Northern district we are in hopes that there will be considerable acreage put into sugar beets during the spring of 1929. A large amount of land was prepared and fall irrigated, and we are co-operating with the sugar company officials in this connection.

Through the co-operation of the Canadian Pacific Railway Company a live stock train was operated during February and March, 1928. Eighteen towns were visited and two days were spent at each place. Live stock demonstrations were held each day. Lectures were given during the afternoon on the management and feeding of the various classes of live stock and poultry, and on soil cultivation, irrigation, rotation of crops suited to irrigation, varieties of grain, forage crops, trees and shrubs for the farm home. The speakers were furnished by the Department of Agriculture, and the Lethbridge Experimental Station co-operated in this respect and also supplied some of the live stock. Following is a list of meetings and attendance at each point:

Macleod, 170; Monarch, 210; Kipp, 110; Diamond City, 120; Iron Springs, 335; Picture Butte, 240; Turin, 180; Coaldale, 140; Taber, 275; Stirling, 205; Magrath, 280; Spring Coulee, 180; Cardston, 145; Woolford, 230; Glenwoodville, 185; Hill Springs, 235; Raymond, 145.

The Lethbridge district boys and girls' baby beef calf club held its fifth annual feeding competition in August at the Lethbridge Exhibition. The competition, twenty-one entries, was judged by Mr. Jos. Johnston of the University of Alberta. The championship was awarded to Edwin Davidson of Coaldale. His animal weighed 1,040 lbs. and sold at 40 cents per pound, bringing a total of \$416. The quality and finish of all calves exhibited was exceptionally good. The total proceeds of the sale were \$3,118.10. Besides the money realized from the sale, there was \$510 paid out in prize money. The interest displayed by the public in this competition has been very encouraging. We feel grateful for the support given by the local firms and buyers and also the donations from local business men for the special prizes.

Members of the Lethbridge district boys and girls' dairy calf club also showed their animals at the Lethbridge Exhibition at the same time as the baby beef club display. The dairy calf club members have done exceptionally well. The rules and regulations in this club are that each member commence with a dairy calf born after January 1st, and show same at the Lethbridge fair. But in order not to lose interest in the animal there are arrangements made whereby it is to be shown as a yearling, a two-year-old and then it

can be entered in the milking competition. Each member is allowed two animals. It is hoped that this will give the members experience in rearing these animals to maturity and also give them experience in keeping milk records and also details in connection with proper feeding. We believe that this will have a tendency to start good foundation herds on a good many farms throughout the Lethbridge district.

Co-operating with the egg and poultry marketing service this branch canvassed the Lomond, Travers, Enchant and Retlaw districts with the object of marketing their turkeys this fall. Generally speaking, the farmers of the aforementioned districts were well satisfied with the services they received during the fall of 1927, and nearly their entire turkey crop was marketed through this organization this year. One car was secured from these districts and shipped to Montreal.

Several meetings were attended during the year, and I attended and judged at several of the summer fairs.

We have had the finest support from the various organizations throughout the districts in connection with the past year's work.

REPORT OF E. L. GRAY, DISTRICT AGRICULTURIST, HANNA.

Field work for 1928 commenced on the farms of the Hanna-Youngstown district during the week beginning April 17, becoming general about May 1. At that time prospects for a prosperous crop season were excellent; rains of the previous autumn and an exceptionally heavy snowfall during the winter had given soils an abundant moisture supply, which is the district's chief need in crop production. Following the opening of farm operations, however, a period of drought began which continued throughout May. Germination of the seeded grain was most uneven, resulting in extremely "patchy" crops, which the excellent growing weather of June and July did not make uniform. Such uneven-growing grain could only suffer disastrously if frosts occurred before it matured. These did occur—in August. They reduced the prospective yield by at least forty per cent. and relegated a heavy percentage of the wheat threshed later into grades below No. 3 Northern. Instead of all crops returning their producers a profit, many of them failed to meet production costs; so the season closed a somewhat disappointing one in grain production.

During the year noticeable changes took place in the live stock industry in this part of the Province. Cattle production lost ground; early in the summer high prices caused a heavy liquidation of holdings, and buyers literally swept some localities clean of stock, including, unfortunately, calves and breeding females. There was a slight revival of interest in horse-breeding, considerably more mares being bred than in any one season for some years. The interest in swine production increased in the latter part of the year, when there became available a plenteous supply of grain of low market value. A marked change took place in sheep-raising; this

class of stock advanced another stage in becoming not only a leading sideline to grain farming, but also a main enterprise on many farms in the district.

The year 1928 was the first full year that the agricultural office was maintained in Hanna. A program of assistance in developing those lines of farming most necessary and most suited to the district was followed. Through the co-operation of the agricultural societies at Byemore and Youngstown, the Hanna Kiwanis Club, the Endiang Board of Trade, the Youngstown District Builders' Association, the Hanna Herald, and numerous public-spirited individuals, some very gratifying results were obtained.

A campaign of crop improvement work through the betterment of seed was undertaken in the spring months. During this there was distributed through the office 6,131 bushels of registered, or improved, seed wheat, 1,362 bushels of seed oats, and smaller quantities of seed barley, flax, sweet clover, and grasses. Out of this distribution there arose seven combined standing crop and cleaned seed competitions and one field crop competition; three of the former were destroyed by hail, the remainder being completed. At the close of the season seed fairs were held at Hanna and Youngstown. The district was also represented by grain exhibits at Toronto, Chicago and Edmonton exhibitions.

With live stock the greatest efforts were made in promoting sheep-raising. Assistance was given in the purchasing and distribution of 1,837 breeding ewes and rams. Buyers were secured for, and aid was given in the assembling of, a shipment of 1,682 lambs. Our district assembled three car-loads of wool for the Canadian Co-operative Wool Growers, Ltd., Toronto. Through the co-operation of the Dominion Live Stock Branch three sheep-breeding clubs were organized: a boys and girls' sheep club was formed at Youngstown, a Shropshire club under the federal ram bonus scheme was formed at Hanna, and a Suffolk club under the federal ram loan policy was organized at Craigmyle.

Assistance in cattle production was confined to the securing of a few bulls for farmers who were in a position to purchase them. Two swine-breeding centres were developed, Yorkshire boars being loaned to the farmers by the Dominion Live Stock Branch.

A horse club was organized at Oyen. A Clydesdale stallion was obtained in Saskatchewan through the scheme of federal assistance to horse-breeding. The club was successful, and is being continued in 1929.

Considerable aid was given to poultry producers in the exchanging and securing of breeding stock, and in flock culling. A more regularly organized programme of work in poultry is being planned for the coming season.

Approximately one-quarter of the year was given to general agricultural work in distant parts of the district and in other sections of the Province. In February and March the responsibility for part of the lecture work on the live stock train operated in the Lethbridge area was assumed. Two weeks were devoted to checking the sale of Chester White swine in the territory north and east of Calgary. Live stock judging was done at four fairs in the

north-eastern part of the Province. Meetings were held in outlying sections of this district where no other work could be attempted during the first year; crop competitions and other activities will be carried to such points in 1929.

REPORT OF A. R. JUDSON, DISTRICT AGRICULTURIST, GRANDE PRAIRIE.

The past winter lingered somewhat, delaying spring work. On account of the previous fall being wet, threshing was delayed, and but little fall work was done on the land. As a consequence seeding operations were rushed and a great deal of stubbing-in done. Moisture was not so plentiful as in the two previous years, and the need of better preparations was generally apparent.

While fields not sufficiently well prepared for crop suffered from lack of moisture, the yield south of the Peace River was well up to the average, and following two bumper crops, as it did, must be recognized as satisfactory. The area north of the Peace and adjoining areas, including the Falher district and the Fort Vermilion territory, suffered more from drought and harvested relatively light crops.

While over the greater part of the area the crop was satisfactory in volume, the quality due to early frosts was lower than usual. Although much damage was done, there is a considerable amount of high-grade grain. Peace River will be well above the Provincial average in the percentage going into the contract grades.

The season was one that clearly demonstrated the value of early maturing varieties of wheat. Had these areas this season been limited to Marquis wheat and other varieties requiring a similar period to mature, a particularly small percentage would have reached the contract grades. A non-shattering, stiff strawed, early maturing wheat of good milling quality and satisfactory yield is required. It is hoped that Reward will meet this need.

With almost ideal weather for harvesting and threshing, the crop was soon in the bins and fall work under way. While there was little moisture in the ground and much of the land was too dry for plowing, more fall plowing was done than in any previous season. In fact, many farmers plowed their whole farms, and the area for summer-fallowing next season will be materially reduced, which is considered a mistake. This, along with the very considerable acreage of new land brought under cultivation, will give the Peace River a very substantially increased crop acreage next season. More than a normal rainfall will be required to yield a satisfactory crop.

Fall plowing has increased in popularity in some measure, due to the very general damage from wireworms. Although the damage during the past season was no greater perhaps than that of two years ago, it was greater than that experienced in 1927.

Grasshopper damage was very limited. There was no injury and practically no grasshoppers in the area where poison bait had been used. A small amount of bait was spread in the Fort Ver-

million district, but no damage was encountered. Grasshoppers have been reported in large numbers on the Carcajou prairie, and some help will be required there next season.

NEW SETTLERS.

The movement of new settlers to the Peace River district this season has been the greatest in its history; 5,481 homesteads and soldier grants have been taken during the calendar year. These have been spread over the entire area. Over 400 settlers have gone into the Fort St. John district and almost as many into the Battle River country. Considerable settlement is taking place between the Smoky River and Sturgeon Lake and some beyond the Lake. In addition to the homesteaders there has been a steady movement of farmers who have purchased lands in the settled areas. The inrush of settlers has brought individual work to the fore and to a point where it must be given the first consideration of this office.

GOOD SEED MOVEMENT.

Early in the year the Peace River Seed Board, Grande Prairie district section, was organized. The organization of the board was backed by the municipalities, each of which appointed two members, one a councillor and the other a good farmer in the district, and rendered financial aid so that the board might more fully function. The Superintendent of the Beaver Lodge Experimental Station was made a member ex-officio.

The following were the objects of the board:

1. To encourage the use and production of good seed.
2. To assist the producer of good seed in marketing by the bringing together of the purchaser and the producer.
3. To undertake, when warranted, the organization of a growers' company for the purpose of cleaning and handling of seed.
4. To encourage the exhibition of farm seed.

The board was successful in placing and securing for farmers a considerable quantity of registered seed. Some assistance in marketing was given. Progress was made in encouraging the exhibition of grains. The third object is being realized in the organization of the Peace River Co-operative Seed Growers, Limited, which has recently been incorporated.

The growers' company has been organized for the purpose of handling high-class seed, mainly oats at the present time, and primarily registered seed. It is the intention of the company to erect and equip a central cleaning plant for the 1929 crop. Its present efforts are being directed towards the laying of a firm foundation; the acquiring of the necessary capital and the securing and proper placing of the necessary seed stocks to build up the required volume. Satisfactory progress is being made.

The good seed movement is bringing about better farming methods. It is getting at the weed problem from another and very important angle. Some noxious weeds are gaining ground in the district, but people are becoming more alive to the situation and are taking a more practical interest in their control and eradication, which is encouraging.

LIVE STOCK.

Horses.—Stallion clubs organized under the federal assistance plan operated during the year at High Prairie, Berwyn, Waterhole and Grande Prairie. Two of these are Percheron clubs, one Clydesdale and one Belgian. Some difficulty has been experienced in securing suitable stallions, which has hampered further development in this connection.

Some horses have been shipped in during the year, but there is but a limited demand. Tractors have gained a good deal of ground during the year. While this move is a desirable one in many respects, a number of settlers with farms of too limited an area to warrant this purchase are securing them.

Cattle.—There is only a comparatively small number of beef cattle in the Peace River. While few farmers should go into them extensively, there should be many more cattle in the country. Better prices have stimulated a limited interest, but on account of past difficulties, progress in establishing herds of any size will be rather slow.

The swing away from dairy cattle has been halted, and the need for a steady income from this source is again being realized in some districts.

Sheep.—There are few sheep in the north, but those farmers who were reasonably well equipped to handle them have found them a great asset, and increased interest is being stimulated. Small flocks should be encouraged on many grain farms, but progress must be made gradually.

Swine.—Two swine clubs were continued this season. Owing to the pressure of other important work, however, little time was devoted to them. A successful club fair was held at Spirit River, but on account of a small entry at Sexsmith the pairs were shown in the regular school fair classes.

Hog prices have been very erratic during the year, and as a consequence have discouraged many breeders. Those, however, who have stayed with the business from year to year have invariably found it well worth while. Thousands of feeder hogs, had they been available, could have been fed very profitably this fall utilizing much of the low grade grain. There will be an increased production next season, but not to the extent warranted.

POULTRY.

A definite poultry promotion program was outlined for the year, and arrangements made for the Poultry Branch to engage a poultry promoter who would give his full time to the district and work through this office. However, the appointment was not made until spring was at hand and the promoter only remained in the district a short time after his appointment, so little progress was made. There is a real need for this work, and arrangements might well be made to take care of it.

The co-operative marketing of turkeys was again carried on in the Grande Prairie district. The season was much more favorable

for turkeys than 1927 and losses were again about normal. The hatch, however, was poor, and on account of lack of snow in the fall the birds did not fatten as well as they might have. Three car-loads, with a total net weight of some 76,000 pounds, were assembled.

A co-operative shipment was made from north of the Peace, but not under the direction of the District Agriculturist, as he had found the previous season that he could not keep in sufficiently close touch with the assembling there to accept the responsibility.

In the past these shipments have been organized annually through this office. In order to overcome this necessity and in order to allow the producer to do more of his own business, the Grande Prairie Co-operative Poultry Producers, Limited, has been organized. This organization is accepting responsibility for future shipments.

MISCELLANEOUS.

Agricultural Students.—Efforts were again made throughout the season in interesting young people in taking a course at the Vermilion School of Agriculture. This territory is now fairly well represented at the school, but a number more would have gone this season had the crop returns been more satisfactory. The assistance given in railway transportation is appreciated, and is largely responsible for the present increased attendance.

Nitro-culture.—Arrangements were again made with the Vermilion School for the distribution of legume nitro-culture locally through this office.

School Fairs.—School fair work during the past season has been in charge of Mr. F. B. Dixon of the Vermilion staff, who made this office his headquarters. All assistance possible was rendered him. Nine fairs were held; twelve are in prospect for 1929.

Lord Lovat Trip.—The District Agriculturist was made responsible for the organizing and conducting of Lord Lovat's trip through the Peace River country. Lord Lovat, Chairman of the Overseas Settlement Board of Great Britain, was accompanied by Mr. Plant, the Secretary of the board, Mr. Skevington of the British Treasury, and Col. Rattray and other officers of the Land Settlement Board in Canada. Some eight days were spent by the party in touring the various sections. Surprise was expressed at the extent of the area, the excellent class of settlers and the possibilities of the country.

Swedish Commission, etc.—A Government Commission from Sweden, concerned with possible settlement of Swedish people, consisting of Mayor Ahlstrom, adviser to the Committee of Unemployed, Dr. Hoglund, director of the Royal Board of Agriculture, and William Weibull, director of Weibullholm's Seed Establishment, was conducted over the same area. Each of these gentlemen was charged with a particular line of investigation. They were highly pleased with the opportunities for settlement in the Peace River, and expressed appreciation of the assistance given them.

In addition to the above, the District Agriculturist has been called upon to extend a like service to several individuals connected with organizations active in similar work. In this connection he is co-operating with the Alberta Agent General in London and with others.

REPORT OF JAMES MURRAY, DISTRICT AGRICULTURIST, MEDICINE HAT.

The year 1928 will be kindly remembered by the majority of farmers in south-eastern Alberta. With very dry weather continuing from early spring until after the first of June, there was no little anxiety for a time as to the outcome of the big crop seeded, but before it was too late copious rains fell and saved the situation. Heavier crops would have been harvested had there been more rain in July and early August, but as it was a wheat crop that would average over 25 bushels per acre was secured.

Harvest and threshing weather, in contrast to that of the previous year, was almost ideal, and the crop was secured in record time. Some disappointment was occasioned through the shortage of cars at threshing time, but as the open dry weather continued until the end of the year all the grain stored in open bins and piled on the ground was shipped with little loss.

The August frosts, which seriously reduced the yields and injured the quality in many parts of the Province, did little damage in this district. A small percentage graded as low as No. 4, but to counterbalance this there was a fair proportion of No. 1. Most of the crop graded 2 and 3 Northern.

The two heavy crops in succession of good quality grain have made the majority of farmers fairly prosperous. Large acreages were seeded both years, and the returns have been sufficient to liquidate many old debts, to renew machinery that was becoming badly worn, and to leave a reserve for seasons less favorable. Many, too, have been able to add to their cropping acreage by buying land conveniently located. This will enable them to adopt a system of farming better suited to this area, where small farms are not the most efficiently operated.

The good crops harvested in 1927 and 1928 on land but poorly prepared has had the effect of encouraging the seeding of too much of such land another year. Each year there are a few more converts to the system of sowing only summer-fallowed land to grain, but there is still room for many more. There is not this year the acreage in fallow that there should be, and as the stubble land is very dry, the present prospects for a crop next year are not too bright.

A tremendous amount of new equipment has been added to the farms of this district. A large number of combines have been in use, and for the most part they have given good satisfaction. There appears to be no doubt that when efficiently operated they reduce the cost of producing a bushel of wheat, and when a farmer has from five to six hundred acres to cut each year, the purchase of a

combine would seem to be justified. In a year with a light crop it may be possible with the combine to make a little profit when by the older method there would be no margin.

It is questionable if as good a case can be made out for the hundreds of trucks that have been bought. Long hauls with horses are expensive and trying, and here the use of the truck is justified, but for short hauls the trucks have little or no advantage over horses. Many of those who have bought trucks have counted on considerable revenue from custom hauling. If this is not available, the truck may easily become an expensive luxury.

BETTER SEED.

It has been possible this last two years to interest many farmers in securing a supply of pure seed. We have as yet only a few farmers making a business of growing registered seed, but many have bought from ten to fifty bushels of registered seed, so that after harvesting a crop they have a sufficient quantity of pure seed for their whole acreage, and frequently some to spare for sale. Considerable quantities have already been placed for next spring.

One field crop competition was organized this year and it stirred up sufficient interest for the same district to plan on two or three combined seed crop and cleaned seed competitions for 1929. Several of these competitions are being arranged for other districts as well, as this seems to be the best way rapidly to get farmers of a district into the growing of pure seed of desirable varieties.

A local service club sponsored a seed fair here in November, and it proved very successful. The best class was Marquis wheat, there being over thirty exhibits in that class. Most of the grain on display came from a radius of 20 miles and some came from a distance of 60 to 70 miles. As the fair promised to serve a useful purpose here, every possible help was given, both in interesting the farmers in showing, and during the progress of the fair, in looking after details.

New varieties of wheat continue to come into the district, many farmers being tempted to buy by the glowing descriptions that appear in the press. The new early wheats have no place in this district. Marquis is still the standard, and we are endeavoring to keep it so. Renfrew has been giving good results with many farmers, and is being grown to a greater extent each year. It frequently out-yields Marquis, but it often grades one grade lower than Marquis, as it is less attractive in appearance.

FERTILIZER EXPERIMENTS.

At the request of the Field Crops Commissioner arrangements were made to co-operate with the Canadian Pacific Railway in testing out the efficiency of superphosphate as a fertilizer for wheat. Two farmers at Winnifred and three at Bindloss agreed to co-operate. Five-acre plots were used, the fertilizer being applied at two rates—65 pounds and 105 pounds per acre. A special fertilizer drill supplied by the Canadian Pacific Railway was used. Plots were sown on summer-fallow and on spring plowing, check plots without fertilizer being sown in each case.

Owing to delays in getting the drill it was not possible to seed until the latter part of May, by which time even the summer-fallow was very dry. Germination was far from uniform, and much of the seed, particularly on the spring plowing, did not come up until the rains came in June. All the plots were carefully inspected twice during the season, once in July and again when they were ready for harvesting. Close inspection failed to reveal any difference in vigor, height, color or time of maturity where the fertilizer had been applied. Weights were not taken on the various plots, partly because the stands were not sufficiently uniform to make yield figures of value, and partly because the farmers had neither the time nor the facilities to get accurate returns.

FORAGE CROP CARS.

In co-operation with the Canadian National Railway, forage crop cars were operated by the Department on several lines running out of Edmonton. As in the two previous years, I was placed in charge. Twenty-five meetings were held with an average attendance of 81. Seed was carried of all the commoner grasses and clovers for selling in limited quantities to those who attended the meetings. In all 5,543 pounds of seed were sold to 380 buyers.

In addition to discussing the growing of grasses and clovers for meadows and pastures, some attention was given to the control of weeds, seed selection and the best varieties of cereals to secure quality and yield. At each of the meetings a lecture was given on farm poultry that was much appreciated by those in attendance.

The Canadian National Railway furnished to the Department free of charge a first-class car fitted up for lectures and demonstrations, a baggage car to carry a supply of seed and a caboose for the accommodation of the staff. They also furnished a man to keep the cars heated and clean, and moved the cars from place to place as required. Their service was all that could be desired.

LIVE STOCK AND POULTRY.

The improved prices for all classes of live stock has stimulated the interest of many farmers in improving the quality of their breeding stock. I have been able during the year to help a number of farmers secure good bulls of both the dairy and beef breeds, and good breeding stock of hogs of both sexes.

There is a growing interest in sheep throughout the district, and assistance was given a number of men to secure good rams and to find a market for others by arranging exchanges. All those who have gone in for sheep-raising have been well pleased with their investment, and we look for further development along this line.

There is also an increased interest in the improvement of flocks of poultry. Good breeding stock has been brought in by many farmers, better houses are being built, baby chicks are being bought in greater numbers each year, so that an increasing number of farmers are placing the keeping of poultry more on a business basis. Good breeding stock of turkeys has been located for those wishing to improve their flocks, and assistance has been given others in finding a market for their surplus.

FEED CROPS.

With abundant crops of grain being produced, there has been less general interest in the growing of feed crops, as there has been no shortage for the past two years. However, work has been continued in testing out various varieties and strains of corn in different districts and in introducing other fodder crops likely to prove useful for certain localities.

The varieties of corn which continue to prove best suited to our conditions are Gehu, Improved Squaw, Northwestern Dent, Falconer, and early strains of Minn. No. 13. For grain production for the use of poultry and for "hogging off" the two first-named are most satisfactory; the others are best for cutting for fodder purposes.

Excellent seed of most of these varieties is being grown in this part of the Province, several farmers making a specialty of seed production. The seed which they are producing is more likely to prove satisfactory in Alberta than that brought in from outside, as the locally grown strains are now well acclimatized.

The acreage in alfalfa continues to increase from year to year, some of it being sown on irrigated land, some of it on land classed as dry, and a limited amount on lands that are sub-irrigated to a depth of from three to six feet, where it is producing two profitable crops per season. For such land there is no other crop so well adapted, and the acreage so seeded will increase as such lands are located.

For the convenience of farmers in this part of the Province a supply of nitro-culture for the inoculation of alfalfa, sweet clover and other legumes is kept in the office during the spring and early summer months.

Crested Wheat Grass continues to be popular with those who were supplied with a few pounds several years ago. Several additional lots were supplied to interested farmers last spring.

MEETINGS.

In addition to the meetings held in connection with the forage crop car, about a dozen were held in other parts of the district from time to time during the year.

PUBLICATIONS.

A four-page circular entitled "Shall We Discard the Summer-fallow?" was prepared in the spring and mailed to about 4,000 farmers in the south-eastern part of the Province.

REPORT OF F. H. NEWCOMBE, DISTRICT AGRICULTURIST, VEGREVILLE.

The season of 1928 is the first one since the opening of this office which might be termed more or less of a failure from the standpoint of crop production. The general prospects early in the season were excellent, with abundant moisture and good growing weather. In fact, evidence pointed towards a bumper crop until on August

23 a severe frost injured very materially about 80 per cent. of the crops in the district. Acre yields were very fair, in most cases running between 30 and 40 bushels, the average probably being about 25 bushels, but the quality and grade were lowered so that very little of the wheat marketed was in the contract grades, and a large percentage was as low as No. 6 and feed. There was very little lodging, and the crop was economically harvested under perfect weather conditions. In this connection it may be noted that combine harvesting is on the increase in this district and, while it is felt that the combine system is perhaps not all that might be desired, those who have used it seem quite well pleased with the results and intend to continue to harvest in this way. There was no rust infection, no cutworms, no grasshoppers and, in fact, no drawbacks except the frost. It is true that the splendid crop prospects earlier in the season gave rise to some over-enthusiasm and purchases of farm machinery and automobiles were numerous, with the result that many farmers now find themselves financially embarrassed to some extent. Much new land was broken during the season, which was ideal for this work, development in this regard being particularly noticeable along the new Canadian Pacific Railway line through the north of this district. Tractors continue to gain in popularity, with the resultant decline of horse-breeding, the wisdom of which is greatly to be doubted.

FIELD CROPS.

The general tendency of the district is towards greater production of fodder and pasture crops. With the practical elimination of free range, the slight indication of soil drifting, and the more generally recognized need of crop rotation, farmers are seeding greater areas to forage crops, principal among which are sweet clover and western rye. The latter two crops are being recommended by this office as the most suitable for our conditions.

There is, of course, the usual tendency to experiment with new varieties of wheat, and while the earlier varieties, such as Garnet, Red Bobs 222, and Reward, showed considerable advantage in this year of early frost, Marquis still leads the field as regards volume and general popularity. Some work has been done by this office in the introduction of registered seed and in the matter of advice on forage crops.

The general weed situation in this district, while not yet acute regarding its effect on crop yields and production, is rapidly becoming a more important factor. By public meetings, as well as personal interviews and visits, this office is endeavoring to give information on the weed situation and is recommending control measures. The work of the Field Supervisor in this district is valuable and is meeting with a great deal of response.

SWINE CLUBS.

The general low levels of hog prices during the early part of the season reacted to some extent against the success of swine clubs. However, feed was abundant, and in general the work may be said to have been satisfactory. A new swine club was organized at

Mundare, where 27 members raised 81 pigs of very good quality. The clubs previously organized at Vegreville, Willingdon and Chipman were carried on with reasonable success, though the general interest seems to lag somewhat in clubs of long standing. While it is sometimes difficult to report outstanding success, still it is a fact that large numbers of breeding sows of good quality are being introduced through the medium of the clubs, and of this feature the results are not immediately noticeable.

A new club was organized among the settlers on the Saddle Lake Reserve, though for reasons of feed shortage and finances only sows were introduced this year. Next year it is hoped that a thriving club will result from this beginning. We feel that it is rather a valuable piece of work to start these settlers with the right kind of breeding stock, and considerable attention has been given to this new organization. At the Edmonton marketing competitions the first eight places in the single classes were won by members under our supervision, which is evidence of the quality of stock being produced.

The Ukrainian boys and girls seem peculiarly adapted to swine club work, and are making rather an outstanding success of it. The team from Willingdon was successful in the Canadian Pacific Railway competition for northern Alberta, but was later defeated at Calgary. It may be truthfully said that the work of the swine clubs is the most important factor in unifying the breed and improving the quality of the pigs being raised throughout our territory. ✓

PUREBRED SIRES.

Closely connected with the swine club work is the introduction of purebred boars under the federal sire-loaning policy. This office has always been active with regard to this policy, and there are now approximately 50 of such boars in service throughout the district.

Under the same policy 20 purebred rams also have been placed, and these are doing much to stimulate sheep-breeding.

As previously stated, horse-breeding is decidedly on the decline, and nothing further has been done with regard to the introduction of purebred stallions.

DAIRYING.

There is a steady though slow increase in dairying in this district. A few farmers have made it an important and profitable department of their farms, but the majority only milk a few cows in the summer. It has been our objective to encourage every farmer to keep from five to eight real good dairy cows, and to this end two car-loads of Ayrshires, aggregating 36 females and two males, were secured and distributed in this district during the season, one of these shipments coming from Quebec and the other from Saskatchewan.

The demand for this class of cattle is particularly noticeable among the Ukrainian people, and there is every reason to believe that in the future this office will be called on for further assistance in this regard. It is hoped, also, that the animals being placed

will provide the nucleus of a good dairy calf club, particularly in the territory north of the Canadian National Railways. There are in the district a few dairymen who are making a decided success of the business, and prominent among these might be mentioned Hans Mayer, who has a small herd of exceptionally fine females under official Record of Performance and headed by a very high class sire.

SHEEP.

During the past season two small car-loads, comprising one hundred and sixty head of good breeding ewes, were brought in through the activities of this office and distributed to farmers. Sheep-breeding is decidedly on the increase and is rightly popular among those who feel that they have the money to finance the purchase of stock and the erection of fences. The Down breeds predominate and our shipments have been principally of Oxford with a few of Shropshire and Hampshire breeding.

Demonstrations and assistance have been given on numerous occasions on the proper method of castration and docking.

POULTRY.

The policy of poultry production instituted in this district in 1926 continues to flourish. There are now 42 members in Vegreville Accredited Flocks association, each of whom has a good flock of Wyandottes, ranging in number from 75 to 700. This office, however, advises a maximum farm flock of not more than 300 laying birds to be carried as a side line to the rest of the farm business, and it is pointed out that if the flock is larger than this it must be made a department in itself with someone definitely in charge of it. Considerable assistance is given to this project by this office, particularly in spring during the brooding season, and in the fall and winter at mating time, as well as advice and information throughout the season. In general, it is safe to say that the farmers of this district are finding their poultry production one of their most profitable and reliable sources of revenue. Egg prices have been satisfactory throughout the year, probably with an average of about 35 cents per dozen for commercial eggs, which average would be considerably higher if the sale of hatching eggs were included.

In co-operation with the Provincial Egg and Poultry Marketing Service, a community kill was organized and effected, with the assistance of this office, in November. Approximately 1,500 birds were contributed to this kill after having been properly crate-fattened and milk fed for a period of about a month. These birds, properly killed, dressed, graded and packed, were disposed of at an average price of \$1.50 each to the producer, and without doubt this shipment represented the largest consignment of exclusively White Wyandotte, milk fed, cockerels ever offered in Canada. This policy will be continued and enlarged upon next year, when it is hoped that even better prices may be secured by having greater volume and thereby shipping to better markets.

Particularly interesting in this work is the increased knowledge of poultry, the interest being taken by the farmers in general, and

the greater inclination on their part to make this a profitable part of their business.

SCHOOL FAIRS.

Active supervision has been given to the Vegreville and Mundare school fairs and assistance to the live stock work in other school fairs in our territory. The two fairs mentioned were quite successful, although live stock sections, in general, were not as well patronized as we might hope. It is apparently impossible for the present to organize beef calf clubs in this territory owing to lack of interest in the raising of beef cattle. There were good exhibits of dairy calves, though not sufficient to warrant forming a special club. School fairs, like swine clubs and other educational activities, seem to exhibit waning interest as time goes on. It is easy to interest children in the small projects such as school work, girls' work, and even gardening, but the more comprehensive and more valuable live stock projects are not so popular.

MISCELLANEOUS.

The month of February was devoted by the District Agriculturist and the assistant to the forage crop train operated by the Department of Agriculture. Lecture work on this train covered principally poultry, although some time was also spent on other live stock and field crops. In addition to the lectures given on the train, approximately 35 meetings were attended in this and other districts by either the agriculturist or his assistant when topics of farm interest were discussed. Representatives from this office judged live stock at ten summer fairs, two seed fairs and twelve school fairs. The annual farm boys' camp was held as usual in co-operation with the Vegreville Exhibition association. Sixteen boys attended and received instruction in judging of dairy cattle, beef cattle and hogs.

Requests for service are becoming increasingly numerous until it is reaching a point where it is very difficult to attend properly to all the opportunities that arise. It is safe to say that the office is becoming increasingly popular as time goes on, and the information given or secured covers a very large range of subjects connected with agriculture.

I should like to take this opportunity to acknowledge the splendid co-operation and assistance of Mr. Pidruchney, the assistant at this office, without which the success of the season would not have been possible.

REPORT OF H. W. SCOTT, DISTRICT AGRICULTURIST, SEDGEWICK.

With the opening of the year 1928 the weather moderated and above average temperatures prevailed for the first three months. The snowfall was light and automobiles were used on the main roads all winter. Seeding operations began about the usual time, with the land in good condition. Hot drying winds and the absence of precipitation during April and May caused the soil to dry out

rapidly, and some soil drifting was experienced. On spring plowed land not disked early in the spring, germination was slow and uneven until the June rains. Crop yields gave promise of being above average until the week of August 20, when frost in varying amounts visited this district, reducing not only the yield, but also the grade of wheat from 25 to 75 per cent. This damage was not generally recognized until threshing time.

The general prosperity resulting from good wheat crops of the past few years has made possible the cash outlay necessary for the purchase of tractors and trucks, the clearing of brush and the breaking up of new land. The cultivation of pasture land has caused a further reduction in numbers of live stock throughout the district. The completing of farm operations at the proper season has always been an important factor; the breaking up of new land and the cultivation of the increasing acreage all call for an increase in power, and the efficiency of the tractor to meet this situation is being tested. Should the district experience a series of unfavorable crop years, with a shortage of ready cash to purchase gasoline, oil and repairs, some farmers may be forced to depend more on horses and less on the tractor, but at present the tractor is furnishing auxiliary power on many farms. Power binders, swathers and combines are being tried out, but as yet there is not a sufficient volume of information available to state definitely how much of this new power machinery is economical on the half or three-quarter-section farm.

WEEDS.

The tremendous increase of wild oats in the past three years is causing some alarm. Even on new breaking, plowed, cultivated and seeded with a tractor, wild oats have appeared. There is a determined effort noted all through the district to eradicate this weed, and most of the fields intended for summer-fallow in 1929 were skim-plowed or disked in the fall. Apart from the wild oats, the weed situation is well in hand.

LIVE STOCK.

With the increased return from the market beef there is an added interest in beef cattle, but as it is not possible to keep a large herd of straight beef breeding stock on most of the farms in the district, there is a tendency towards the dual purpose kind. There has been but little reduction in the volume of cream produced in the district for the past two years. Fewer sows were bred and less hogs were marketed than a year ago, though a few additional sows were bred in the fall. The Green Valley horse club, the oldest in the Dominion, is still an active organization. Some good purebred mares and a number of work horses were shipped out of the district during the year, and a number of head of purebred Holstein-Friesian cattle were selected for the shipment to Japan. Though the price of breeding ewes is at present high, a number of small farm flocks of sheep have been established, and there is evidence of an increased interest in sheep. A few additional farmers have purchased day-old chicks in lots of from 200 to 500. This necessitates a cash outlay for a brooder, stove and chicks, and following the investment

there is added interest in the development of the chicks, marketing of the cockerels, feeding of the birds and marketing of the eggs, together with better poultry houses and fixtures in the houses. Larger profits are obtained from this added attention to the poultry business.

Live stock activities in the district required considerable attention, and close supervision was required from this office in directing poultry work. A community poultry kill was held by the Daysland Poultry Association this fall under the direction of the Dominion Poultry Branch, at which a number of people interested in poultry from other districts were present.

There is a marked increase in the amount of legumes seeded each year, particularly sweet clover, and the amount of nitro-culture distributed from this office last year was seven times larger than three years ago. With the increase in sweet clover, bees are being introduced, as the two seem to go well together.

AGRICULTURAL FAIRS AND COMPETITIONS.

A very successful standing field grain competition and good farms competition was conducted by the Camrose Agricultural Society this year, which I had the pleasure of judging. Most of the fields entered were new land and registered seed was used. The weather conditions at Camrose were favorable, and some exceptionally high yields of good seed were obtained. The field of wheat which won first in this competition also won the cup offered by the Edmonton Chamber of Commerce for the best field of wheat in Alberta north of Red Deer. Hon. George Hoadley, Hon. V. W. Smith and 36 members of the Edmonton Chamber of Commerce attended the banquet given by the Camrose people to Mr. W. S. Scott, when the cup was presented.

The Camrose Exhibition Association conducted a Farm Boys' camp in connection with its summer fair. The association provided a tent for sleeping quarters, passes to the grounds and grandstand, meal tickets for the three days, and forty dollars for prize money for a judging competition. I was asked to select fifteen boys, sixteen or seventeen years old, and take charge of them during their stay at Camrose. The boys selected had all stood high in school fair work in previous years, but had never taken the school fair short course at one of the schools of agriculture. During the three days we were able to devote a good deal of time to instruction in live stock judging, and were assisted by Prof. J. P. Sackville of the University of Alberta, and P. Fleming, fieldman for the Jersey Cattle Breeders' Association, as well as the judges of the regular classes at the fair. From this experience we believe that this kind of work might well be extended as opportunity offered.

During the year I attended the following fairs and judged at most of them: Sedgewick, Killam, Camrose, Goose Creek, Busby, and the Camrose Horticultural show. I also attended and addressed the Trustees' Association convention at Hardisty, and a teachers' convention at Camrose.

I was called upon to assist the committee which collected and displayed the constituency exhibit which won first at both the

Calgary and Edmonton summer fairs. I had charge of some superphosphate experimental work conducted by seven farmers in the immediate vicinity of Sedgewick. The frost in August, to a certain extent, spoiled the results from these fertilizer experiments, making comparisons unsatisfactory. In any case, the results of one season's work would not be sufficient to warrant making a statement as to the advisability of using superphosphate at the present time.

I assisted the Women's Institute girls' club of Daysland and Sedgewick in gathering and preparing the material for their demonstration at Edmonton in April. Four teams were prepared for the Alberta Dairymen's convention at Calgary in February, where they made a creditable showing. A considerable number of meetings of various kinds were addressed during the year, and this office has been a centre through which a Labor Bureau has been conducted for the district, and a centre through which considerable live stock has been exchanged, sold and bought.

SWINE CLUBS AND SCHOOL FAIRS.

Swine clubs and school fairs received considerable attention. Swine clubs were in operation at Czar, Hardisty, Sedgewick, Alliance and Treaty Hill. Twelve boys and girls attended the swine club show at Edmonton, and there again made a creditable showing. We have at present 25 Yorkshire boars on loan through the Dominion Government sire loan policy in the district for the use of swine club members and others. Six hundred and fifty sows were bred in the fall of 1927 and in the spring of 1928. The extreme cold during November and December of 1927 caused a delay in breeding, so that a larger number of litters than normal was farrowed in May and June. This meant that there were not as many club pigs ready to market at the time of the show as is usual.

Nine school fairs were held in the district. Eighty-eight schools took part with 1,869 pupils on the roll, and 71 per cent., or 1,338, exhibited, the total number of exhibits being 6,121. The interest in the school fairs is well maintained throughout, and while the frost reduced the number of exhibits in some of the classes, yet the school fairs as a whole were good. The following boys and girls were winners at their respective school fairs in 1927, and attended the scholarship short course at Vermilion in August, 1928: Camrose, Vernon McNeight and Bernice Olson; Strome, Norman Miller and Alice Dalueg; Killam, James McGowan and Christine Olson; Sedgewick, Laird Tanton and Gwendolyn Gant; Hardisty, Morris Miller and Ivy Moulder; Amisk, David Brockie and Clarice Lagore; Provost, Brian Piercy and Joan Manning; Treaty Hill, Einar Huse and Ethel Cameron.

Public-speaking contests were conducted by the school fair association at Czar, Amisk, Hardisty, Sedgewick, Strome and Treaty Hill. In all there were 68 contestants. For these events only medals are provided as prizes. Mr. W. G. Farquharson, M.L.A., Ribstone, and Mr. A. G. Andrews, M.L.A., Sedgewick, donated the first medal in the senior division in the contests held in their respective constituencies. The Extension Department of the University of Alberta again assisted with the judging and in providing the

program. Practically all the contestants who have taken part in the international oratorical contest from this district have had training in public speaking at the contests conducted by the school fair associations.

The hearty support and co-operation of individuals and organizations throughout the wide area served from this office has made possible so much organized work, and we take this opportunity to thank one and all who have assisted in this work.

Report of the School of Agriculture, Claresholm

(S. H. GANDIER, *Principal*)

TEACHING STAFF.

Permanent teaching staff has consisted of the Principal, the Instructor in English and Mathematics, Instructor in Animal Husbandry, Instructor in Field Husbandry, Instructor in Irrigation, and two Instructors in Home Economics. These officers were engaged primarily with instructional work during the school term from October to March, with management of the school farm, plot and field experiments, school fairs promotion, field work with the Lethbridge Northern Irrigation project, organization of boys and girls' clubs, Women's Institute short courses, and other extension work, during the spring, summer and early fall months.

I regret to report the loss of three efficient instructors from the permanent staff. W. M. Cockburn, Instructor in Animal Husbandry, E. G. Bayfield, Instructor in Field Husbandry, and E. E. Eisenhauer, Instructor in Irrigation, resigned from their positions after the close of the winter term. Two of the vacancies thus caused were filled by the appointment of W. J. Harper, B.S.A., as Instructor in Animal Husbandry, and of Wilfred Robinson, B.S.A., M.Sc., to the position of Instructor in Field Husbandry. Both appointees are graduates of the University of Alberta. Their services from the time of their appointment to the end of the year covered by this report have proved commendable. A successor to Mr. Eisenhauer was not appointed.

Appointments to the following positions are made at the commencement of the school term in October for the duration of the school term only, and may be considered as temporary staff: Instructor in Science and Bookkeeping, Instructor in Veterinary Science, Instructor in Mechanics, Instructor in Dairying, Instructor in Home Nursing. Temporary appointments remained the same as for 1927 except for the following: Instructor in Dairying, L. C. D'Aigle (January to March), A. N. Macdonald (October to December).

A general spirit of harmony and co-operation amongst the staff in the interests of the school existed throughout the year.

ENROLMENT.

Registration in the regular classes in October, 1928, was slightly in excess of that of the year previous. Since the special winter course for the British trainees has been discontinued, our total registration for the fall term was decreased to that extent. In most sections of southern Alberta, grain crops suffered severely, both as

to yield and grade, from hail, frost and glume blight, and this had a depressing effect upon our school attendance. Total enrolment in October was 78 students, apportioned to the various classes as follows: First Year Agriculture, 29; Second Year Agriculture, 22; First Year Home Economics, 12; Second Year Home Economics, 15.

DIPLOMAS.

The closing exercises for term 1927-28 were held on April 4, when diplomas were granted to the following graduates:

Home Economics.—Grace Andrews, Vulcan; Verda Flitton, Claresholm; Simone Hanneuse, Wayne; Annetta McPhee, Frankburg; Lola McPhee, Frankburg; Roberta Oliver, Gleichen; Ida Svenson, Orton; Ethel Tolley, Orton; Jean Toone, Claresholm.

Agriculture.—Wayne N. Anderson, Barnwell; Rullon Butler, Claresholm; Milton L. Conrad, Taber; William C. Elton, Cowley; Edward J. Fraser, Claresholm; Morris Jones, Claresholm; Aubrey H. Laycroft, High River; Howard L. Marin, Brooks; Alex. Marshall, Lethbridge; Edwin Nelson, Vulcan; William P. Newton, Fishburn; Vernon L. Wight, Mazeppa; Wayne Wight, Lang, Sask.; P. Arthur Remington, Granum.

Medals, Prizes and Scholarships.

1. Preparation of House Furnishing and Decoration Books: Two prizes valued at \$5 and \$3.—1, Lola McPhee, Frankburg; 2, Ida Svenson, Orton.

2. Meal Serving Competition, Second Year Home Economics: Three prizes valued at \$5, \$3 and \$2.—1, Jean Toone, Claresholm; 2, Ida Svenson, Orton; 3, Grace Andrews, Vulcan.

3. Highest standing in Cooking, First Year Home Economics: Two prizes valued at \$5 and \$3.—1, Dale Graham, Vulcan; 2, Ella Barlow, Barons.

4. Best set of Lingerie, First Year Home Economics: Two prizes valued at \$5 and \$3.—1, Ella Barlow, Barons; 2, Dale Graham, Vulcan.

5. T. Eaton Company prizes for Millinery, open to first and second year students: Four prizes valued at \$5, \$4, \$3 and \$2.—1, Ella Barlow, Barons; 2, Lola McPhee, Frankburg; 3, Eda Frank, Frankburg; 4, Doris Nash, De Winton.

6. T. Eaton Company prizes for Laundry, First Year Home Economics: Four prizes valued at \$5, \$4, \$3 and \$2.—1, Delia Anderson, Frankburg; 2, Eda Frank, Frankburg; 3, Dale Graham, Vulcan; 4, Lilian Caldwell, Warner.

7. T. Eaton Company prizes for Bread-making, Second Year Home Economics: Three prizes valued at \$5, \$3 and \$2.—1, Ethel Tolley, Orton; 2, Lola McPhee, Frankburg; 3, Annetta McPhee, Frankburg.

8. T. Eaton Company prizes for Graduation Dresses, Second Year Home Economics: Three prizes valued at \$5, \$3 and \$2.—1, Lola McPhee, Frankburg; 2, Jean Toone, Claresholm; 3, Ida Svenson, Orton.

9. Highest standing in Public-speaking and Debating, open to students of both the Agriculture and Home Economics courses.—Second Year: Two students equal standing, therefore two prizes awarded, value \$4 each: Roberta Oliver, Gleichen; Vernon Wight, Mazeppa. First Year: Prize valued at \$5—Delila Anderson, Frankburg.

10. Highest standing in Field Husbandry.—Second Year: One prize, 2 bushels registered Marquis wheat—Wayne Wight, Lang, Sask. First Year: One prize, 2 bushels Garnet wheat—Geo. Howden, Kersey, Alta.

11. National Elevator Company Limited Trophy, for competition in Field Husbandry in the Second Year—Milton L. Conrad, Taber, Alta.

12. Highest standing in the study of Soils, one prize of text on "Soils"—Vernon Wight, Mazeppa.

13. Highest standing in Woodworking in the Second Year, one prize—Edwin Nelson, Vulcan.

14. Highest standing in Blacksmithing in the First Year, one prize—Thomas Thompson, Stavely.

15. Highest standing in Stock Judging: Second Year, silver medal—Vernon Wight, Mazeppa. First Year, bronze medal—Geo. Howden, Kersey.

16. Special prize donated by Miss Jean Macmillan, Director of Women's Home Bureau Service, to the girl of the first year who, in the opinion of the staff, has made most marked progress during the term—Maria Peterson, Czar.

17. Special prize for proficiency in Dairy Work, Second Year Home Economics—Grace Andrews, Vulcan.

18. General proficiency, First Year Home Economics: Two prizes valued at \$8 and \$4, donated by the Calgary Herald—1, Dale Graham, Vulcan; 2, Ella Barlow, Barons.

19. General proficiency, First Year Agriculture: Two prizes valued at \$8 and \$4, donated by the Calgary Herald—1, Geo. Howden, Kersey; 2, Lawrence Kirkhoff, Taber.

20. General proficiency, Second Year Home Economics, silver medal—Ida Svenson, Orton.

21. General proficiency, Second Year Agriculture, silver medal—Wm. C. Elton, Cowley.

22. The P. Burns Scholarship of \$50, donated by P. Burns, Esq., of Calgary, for competition in the first year of the course in Home Economics, awarded to the student who, by vote of the staff, is considered to have made the greatest use of her educational opportunities during the school year, having at the same time made useful contribution to the social, literary and athletic activities of the student body—Eda Frank, Frankburg.

23. The P. Burns Scholarship of \$50, donated by P. Burns, Esq., of Calgary, for competition in the first year of the course in Agriculture, and awarded on the same conditions as the preceding scholarship—Lawrence Kirkhoff, Taber.

STUDENT ORGANIZATIONS.

The organizations governing student affairs are the Student Council, the Athletic Association and the Literary Society. The executives of these associations, with staff direction, functioned effectively in the promotion of self-government of the student body, in their athletic activities, and in the social, musical and literary entertainment.

Since there is no gymnasium at this school, winter athletics were confined largely to skating, hockey, boxing and wrestling. On November 16th a successful field day was held. All events were keenly contested. The "Craig Cup" was won by the first year for the first time in its history. School pennants emblematic of grand championships were presented to George Howden of the second year, and to Margaret Wight of the first year.

The Saturday evening programs of the Literary Society proved to be highly entertaining and drew a full attendance. The school orchestra under Mr. Benn's leadership added to its reputation of previous seasons, being called upon to contribute music for a number of functions in Claresholm as well as for school entertainment. A variety show, consisting of a mixed program of playlets, dances and musical numbers, was presented shortly before the close of the winter term, and drew a capacity house.

The 1928 C.S.A. Year Book was the finest from point of view of art work and workmanship in printing ever published by the

staff and students of this school. It reflects credit especially upon our local printing house, the Claresholm Local Press, in addition to the student editorial and business staffs.

SPECIAL COURSE FOR BRITISH BOYS.

The class which arrived from England in October, 1927, completed its course of training by March 15, and all boys were placed on farms by April 1 through the school staff and the Calgary office of the Dominion Land Settlement Branch. The class consisted of twenty members. While a small percentage of these boys located in the Claresholm district, the majority wished to obtain places in the central mixed farming districts of the Province, and were sent to farms in the vicinity of Red Deer.

FIELD CROP EXPERIMENTS.

Climatic Conditions.—The weather conditions of 1928 were not altogether favorable to crop production in this district. The first three months were normal as regards precipitation, there being slight snowfalls with the ground lightly covered with snow most of the time. April and May were very dry, as from April 19 to June 6 there was no effective precipitation. The temperature fell below the freezing point twelve times during this period. Following this dry spell there was a period of very wet weather which lasted to the end of July. August was slightly drier than usual, though there was ample moisture for filling out the grain. Excellent conditions prevailed during the harvest season except for a slight snowfall on September 7. There were three hailstorms during the month of July. One of these, on July 30, did considerable damage to the experimental plots. These storms caused a considerable loss in the surrounding territory.

The total precipitation for the year amounted to 15.57 inches, which is slightly below the average of 17.025 inches (1914-28 inclusive). The precipitation by months is given below:

	Inches.		Inches.
January	0.650	July	4.060
February	0.310	August	1.835
March	0.650	September	0.660
April	0.470	October	0.640
May	0.195	November	0.380
June	5.490	December	0.230

The last spring frost occurred on June 1 (29°F.), and the first fall frost on August 14 (31°F.), making a total frost free period of 74 days. Neither of these two frosts did very much damage except to susceptible crops such as corn and tobacco. As far as the small grains were concerned, the interval between killing frosts was from June 1 to September 8 (26°F.), 98 days.

In spite of these adverse weather conditions a fair crop was harvested, though the yields were much below normal. The reduction in yield was probably due to two factors: first, the dry spring which resulted in uneven germination and delayed growth, and second, the hailstorm of July 30, which did more damage than was at first estimated.

The testing of varieties of spring and fall sown cereals was continued in 1928. This year there were under test 18 varieties of

spring wheat, 24 varieties of fall wheat, 14 varieties of oats, 19 varieties of barley and 14 varieties of corn. Five varieties of flax and 25 varieties of potatoes were also tested, and 14 rotation experiments were carried on in addition to experiments on cultural practices pertaining to wheat and sweet clover.

New projects for testing forage crops and the fertilizing value of sweet clover were laid down. Three varieties of tobacco were introduced this year. They gave good promise, but were destroyed by an early frost. Superphosphate as a fertilizing agent for wheat was tested both on the experimental plots and in co-operation with neighboring farmers. The results were encouraging.

The problem of weed control became very serious this year, and it was found advisable to reduce the area of land plowed to cereals. To this end all the winter wheats were planted in quadruplicate three-row rod-row plots. This effects a great saving of land and will permit the summer-fallowing of certain areas that are infested with noxious weeds.

Extension work took up a large portion of the agronomist's time this year amongst the farmers of the surrounding districts, who are constantly seeking advice. This phase of activity appears to offer one of the greatest opportunities to render real service.

HORTICULTURE.

The season was not satisfactory for the production of small fruits. Spring frosts destroyed the apple and plum blossoms so that very little fruit developed. A few crab apples were harvested from two trees. These were of fair size and good quality. The currant and strawberry plantings yielded a good crop of fine quality fruit. The raspberry canes killed back badly in the winter of 1927-28, with the result that there was very little fruit produced in the summer of 1928. The flower beds produced a profusion of bloom which lasted until late in the autumn. The grounds were a constant source of attraction to visitors throughout the summer.

THE SCHOOL FARM.

Adverse weather conditions in early August caused a considerable reduction in the crop yields on the farm. A hail storm seriously damaged the various crops, and an early frost further reduced the yield and quality of the grain. In spite of these adverse factors, the eighteen acres of wheat yielded 23 bushels per acre, grading feed, and the oats yielded 28 bushels per acre.

The 20 acres of sweet clover supplied abundant ensilage which was ensiled in good condition. The alfalfa meadow yielded well the first crop, a total of 56 tons being cut from 47 acres—30 acres of which was cut for the first time. The second cutting showed promise of a heavier yield, but was attacked by sugar beet webworms, which reduced the yield to a bare twenty tons. Pasture held out very well owing to the heavy rains in June.

Four Yorkshire sows and one Berkshire sow constitute the breeding herd at present. They farrowed 7 litters averaging 11 pigs each during 1928. The 19 Shropshire ewes dropped 27 lambs, 24 of

which were raised. The ewe lambs are being kept on the farm to increase the breeding herd. The dairy herd at the close of the year consisted of 23 purebred Ayrshires and one grade. One two-year-old heifer qualified for the R.O.P. honor roll, while several mature cows have qualified for their R.O.P. certificate, one with a record of over 15,000 pounds. A new herd bull, first in his class at the Toronto Royal, 1928, was purchased and shipped to the farm in December. The two-year-old heifers were also included in this shipment. These animals are all imported, and show exceptional promise. The beef cattle, 9 Aberdeen Angus and 6 Herefords, are maintained for classroom work. Nine head of horses were shipped to the farm from Oliver.

PIG CLUBS.

Three pig clubs were under the supervision of the School of Agriculture during 1928—one at High River, one at Claresholm, and one at Macleod. Owing to the fact that these three clubs embrace an area of 120 miles long by 20 miles wide, it is difficult for one representative to cover the district satisfactorily in the limited time at his disposal. The members, however, were all interested, and evidently enjoyed the work. The three clubs combined to make up a car-load of pigs for the Calgary swine club show, and were awarded fourth place.

The judging team from High River were successful in winning the Dominion Government judging competition at Calgary. Membership of the clubs was as follows: Macleod, 25; Claresholm, 30; High River, 17.

SCHOOL FAIRS.

Seeds were sent out to all school fair centres during the month of April. Organization of new fairs and visiting of schools in the centres already organized were carried on through May, June and July. Several new fairs were added and practically all of the old ones were retained. Fairs were held at the following points: Arrowwood, Blackie, Brooks, Carmangay, Carseland, Claresholm, Cowley, Chancellor, De Winton, Foothills, Forest Lawn, Hussar, Langdon, Macleod, Milo, Red Deer Lake, Standard, Strathmore, Travers, Twin Butte, Vulcan.

A first experience with two-day fairs was tried at Vulcan with most gratifying results. The exhibits, except poultry and live stock, were placed early on the afternoon of the first day. Judging then followed. At 8 p.m. the doors were opened to the public for inspection. This was followed by an entertainment for the children. Other inter-school competitions were carried through on the second day. It is planned to increase this practice in the case of large fairs. A very gratifying feature of the exhibitions this year was the excellent quality of the exhibits and the increased local interest. It is to be noted also that the local committees are doing some intelligent work in broadening the scope of the fair programs by adding classes intended to encourage broader and more varied community enterprise.

SCHOOL FAIR SHORT COURSE.

Boys and girls of the school fair territory supervised by this school, who made the highest total of points in their fairs, assembled at Claresholm on July 7 for the annual scholarship short course. In former years our short course registration included the boys and girls from the Raymond school fair territory. This year a separate course was held at Raymond, therefore our attendance was considerably reduced. Total registration was 38. The course covered a period of one week, and splendid weather conditions permitted the program of games, classes and entertainment to be carried out. An examination was held on the last day of the course, the results of which determined the winners of the scholarships, consisting of a one-year course at the School of Agriculture, offered by the department. These scholarships were awarded to Zelfa Giles, Carceland, and Harold Shore, Milo.

LIBRARY.

Some further progress has been made in the establishment of an extension library at this school. Upwards of three hundred books were contributed by the students during the year. Students are making valuable use of the library thus collected, but plans have not yet been completed to open this library to the public.

ALUMNI ASSOCIATION.

The C.S.A. Alumni Association has been quite active during the past year, following reorganization in 1927. The summer reunion held on July 20 was attended by over 200 students and ex-students. The executive has instructions from this general meeting to investigate the possibility of an experimental union for association members. It is hoped that such an organization may be effected in 1929.

BLACKLEG VACCINE, LEGUME CULTURES.

The school continues to stock blackleg aggressin for the convenience of farmers and ranchers of the district. Some five hundred doses were sold during the year. The demand for legume cultures was not so great as in 1927, indicating a decrease in cropping of sweet clover and alfalfa. Sales for the year totalled only 145 cultures as compared with 214 for the previous season.

Report of the School of Agriculture, Olds
(F. S. GRISDALE, *Principal*)

STAFF.

The members of the teaching staff at the Olds School of Agriculture and the subjects they teach are as follows: F. S. Grisdale, B.S.A., Principal and Agronomy; G. R. Holeyton, B.Sc., Mechanics; A. T. Kemp, B.S.A., Botany and Horticulture; E. W. Phillips, B.S.A., Animal Husbandry and Farm Management; Wm. D. Gentleman, B.Sc., Live Stock and Entomology; C. E. Yauch, B.S.A., Science; John Hunter, B.Sc., Mathematics and Economics; Miss R. Patterson, Sewing; Miss E. Mayhew, B.Sc., Cooking; Miss H. Hunter, B.H.Ec., Cooking and Household Administration; Mrs. E. M. Finlayson, B.Sc., Matron and Dietitian; Miss M. English, R.N., Nursing; W. S. Morrison, B.Sc., Botany, Practical Field Husbandry and Mathematics; H. S. Pearson, Dairying; Wm. Swift, B.A., English and History; M. W. Malyon, B.S.A., English, Mathematics and Poultry; C. H. H. Sweetapple, V.S., Veterinary Science; F. H. Budgeon, Practical Mechanics; H. Bellamy, Instructor in Athletics.

ENROLLMENT.

The enrollment of the Olds School of Agriculture this year is 243. This is a slight decrease from the enrollment for last year, but is the second largest in the history of the school. There are 125 first year students, 21 third year students and 97 in the second year.

The average annual attendance at the O.S.A. during the 15 years it has operated is 165. The average attendance for the past four years has been 227.

Our students, as in previous years, average about 19 years of age, but among those we have a considerable number ranging in age from 21 to 30. Thus we feel that the instruction offered is being appreciated, not only by the younger boys and girls of the rural districts, but by those of wider experience and more mature years.

YEARLY ATTENDANCE RECORDS.

Year.	1st Year.		2nd Year.		3rd Year.		Special Class.	Total.
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	
1913-14	65	39	....	....	....	....	....	104
1914-15	69	19	23	8	....	....	....	119
1915-16	83	50	21	7	....	....	....	161
1916-17	56	53	19	7	....	....	....	135
1917-18	81	29	18	17	....	....	....	145
1918-19	(Influenza.)		....	....	....	....	....	....
1919-20	85	38	28	8	....	....	....	159
1920-21	69	35	42	17	....	....	....	163
1921-22	49	18	31	16	....	....	....	114
1922-23	55	34	46	14	....	....	....	149
1923-24	37	29	43	23	....	....	....	132
1924-25	83	30	27	20	22	9	....	191
1925-26	60	29	56	13	13	2	21	194
1926-27	81	35	52	24	13	5	....	210
1927-28	103	38	68	26	17	6	16	274
1928-29	90	35	71	25	17	5	....	243
Totals.....	1577		770		109		37	2493

DORMITORIES.

During the summer of 1927 a new dormitory was erected on the O.S.A. campus. The main section of the building provides space for combined gymnasium and assembly hall, library, two classrooms, four offices, a large dining-room, and kitchen, while the north and south wings provide dormitory accommodation for the students. The north wing, or girls' dormitory, accommodates 75 students, and the south wing takes care of 95 men students. Sitting-rooms for the students on two of the three floors of these dormitories provide a means for creating a home atmosphere which is so essential to the life of the student body.

HOME ECONOMICS.

The home economics branch of our work has progressed well during the past year. The subjects taught in this course are practically the same as in the previous years, except that during the past two years we have had a special one week's short course in millinery. This instruction has proven to be very popular.

AGRICULTURAL COURSE.

The course in agriculture has not varied a great deal during the past four or five years apart from the fact that we have made provision for one more period per day for additional instruction in English and mathematics. In this way we feel that those students who have had very little grounding in the academic side of the work will be helped considerably from the standpoint of receiving a general education.

THIRD YEAR COURSE.

The third year matriculation course at Olds has now run for a period of five years. The enrollment in this class has been fairly uniform since the course was instituted. We have a membership of 21 in the class this year, as compared with 23 last year.

The original object of the third year course was to prepare those graduates who did not have their matriculation standing for entrance to the degree course in Agriculture or Home Economics at the University of Alberta. We have found that although only a small percentage of these students have availed themselves of the opportunity of entering the University, they have all spoken very highly of the training received in the course, and with the thorough grounding that the third year offers many of our matriculation students have been able to secure good positions without taking further training.

It also provides a very valuable training for those who intend farming. We have observed, too, that the presence of a senior class of this kind has an influence, not only on the general discipline of the school, but also on the various students' organizations, and tends to promote a studious attitude among the younger members of the student body. On the whole we feel confident that the third year work at Olds has proven to be very beneficial, and we believe that the demand for this advanced instruction will continue to grow as the years go on.

STUDENTS' COUNCIL.

The Students' Council is an organization consisting of members elected by the students from each of the various classes, with three additional members appointed by the Principal. The work of the Council consists in the maintaining of discipline among the students and the general administration of their business affairs. The members of this organization work in co-operation with the Principal, and are largely responsible for the conduct of the students, both inside and outside of the school.

LITERARY SOCIETY.

The Literary Society is of value in the life of the students. It prepares the programs for the weekly entertainments, and is directly responsible for the editing of the school paper, "The Chinook", which is read at these meetings. The programs prepared by the Literary Society consist for the most part of readings, debates, addresses and musical selections, in which the members of the student body take part.

ATHLETIC SOCIETY.

The Athletic Society directs the physical development of the students. Under its direction comes the school rink, and in the gymnasium it is responsible for the organization of indoor baseball, basketball, etc., in addition to the usual sports such as boxing and wrestling.

PRIZES AND SCHOLARSHIPS.

The prizes and scholarships at the O.S.A. for the past year were liberal, and we are grateful to the friends of the school who contribute them, since they create an additional incentive for work.

The names and addresses of those students who were successful in winning prizes for 1928 were as follows:

U.G.G. Scholarship of \$50 for general proficiency in first year Domestic Science—Jean Campbell, Consort.

O.S.A. Scholarship of \$50 for general proficiency in first year Agriculture—Byron Almost, Buffalo View.

P. Burns' Prizes—First Year Women: Jean Campbell, Consort, \$12; Ina Flewelling, Consort, \$8; Gladys Andrews, Gilby, \$5. Second Year Women: Helen Gothard, Brant, \$12; Helen Thompson, Bentley, \$8; Hilda Reglin, Ponoka, \$5. First Year Men: Byron Almost, Buffalo View, \$12; Stanley Milson, Olds, \$8; Bryant Nielson, Alix, \$5. Second Year Men: Alvin Pearson, Hay Lakes, \$12; Philip Rock, Morrin, \$8; Edward Kober, Trochu, \$5.

R. E. Stewart Prize—To those second year students making the greatest advancement in composition: Agriculture, Edward Nelson, Usona; Domestic Science, Susie Loewen, Acme.

Prizes for the Best Graduating Dress—1, Helen Gothard, Brant, \$10; 2, Helen Thompson, Bentley, \$5.

Prize for the Best Set of Lingerie—1, Ina Flewelling, Consort, \$10; 2, Esther Skalin, Kingman, \$5.

Prize for the Best Hat (Second Year Women)—1, Bernada Rehill, Olds, \$5; 2, Bessie Shaw, Carstairs, \$2.

Meal-serving Competition.—1, Grace Henley, Edmonton, \$10; 2, Susie Loewen, Acme, \$5.

T. Eaton Company, Washing Contest (4 kinds of fabrics), First Year Women—1, Gladys Andrews, Gilby, \$5; 2, Jean Campbell, Consort, \$3; 3, Florence Brumfit, Gibbons, \$2.

T. Eaton Company, Bread-making (Second Year Women)—1, Susie Loewen, Acme, \$12; 2, Josephine Wilson, Olds, \$8; 3, Helen Gothard, Brant, \$5.

Bed-making Contest (First Year)—1, Gladys Andrews, Gilby, \$3; 2, Florence Brumfit, Gibbons, \$2.

Leland Phillips Prize (Leland Phillips, Carseland, donor): A Poland China Gilt, to the second year man attaining the highest standing in Stock Judging—Won by Jack Kerns, Acme.

E. L. Churchill Prize (E. L. Churchill, Red Deer, donor): To the agricultural student who attains highest standing in Public Speaking—Winner, Stanley Milson, Olds, \$8.

Fanny Burns Prize (Fanny Burns, Red Deer, donor)—To the first year Domestic Science student who obtains highest standing in Public Speaking—Winner, Gladys Andrews, Gilby, \$5.

Malmur Poultry Farm Prize (M. W. Malyon, Olds, donor)—To the first year student standing highest in Poultry—Winner, Gladys Andrews, Gilby, pen of poultry valued at \$5.

Mona English Prize (Miss M. English, Olds, donor)—To the student having the best hygiene book—Winner, Susie Loewen, Acme.

Knudson Prize, Second Year Grain Judging and Grading—1, Philip Rock, Morrin, \$5; 2, F. Martin, Delia, \$3; 3, E. Kober, Trochu, \$2.

Knudson Prize, Weeds Essay (Second Year Men)—1, Patrick Garrow, Brooks, \$3; 2, Philip Rock, Morrin, \$2; 3, Edward Nelson, Usona.

Nels Linden Prize (Nels Linden, Wetaskiwin, donor)—To the first year student obtaining the highest standing in theoretical and practical field husbandry—Winner, F. Martin, Delia, three bushels first generation Banner oats.

National Elevator Cup and Medal—For the practical judging and grading of grain—Winner, Philip Rock, Morrin.

Mrs. Addison's Prize—For the first year girl making the greatest advancement in sewing—Winner, Miss Edna Sivacoe, Fenn, \$5.

THE O.S.A. EXTENSION LIBRARY ASSOCIATION.

The steady growth of the library during 1928 indicates that it is well established and that it will continue to grow and give increasing service. Nearly 300 well-chosen books were added to the shelves during the year. Other books were on hand at the end of the year, but had not yet been recorded. The total number of books on the shelves is approximately 3,500.

There is an increasing demand from the students in attendance at the O.S.A. for debating material and material for other class work as well.

Following is a list of the officers for the year 1928:

Hon. President, Mr. H. A. Craig; Hon. Vice-Presidents, Hon. R. B. Bennett, Dr. H. M. Tory, Mr. D. E. Cameron; President, Mr. R. E. Stewart; Vice-President, Mr. A. T. Kemp; Secretary-Treasurer and Librarian, Mr. C. E. Yauch; Board of Governors, F. S. Grisdale, E. W. Phillips, K. MacKenzie, E. W. Brunsdon, Dr. C. C. Hartman, W. J. Robertson, F. Bennett, Mrs. A. C. Bury, Mrs. Geo. Beattie, Mrs. E. Wilson, Mrs. F. W. Addison, E. L. Churchill.

SCHOOL FAIRS.

The year 1928 proved a good one for school fairs. Of the 38 fair centres taking garden seeds all held fairs.

Of this number the following five were new centres: Byemoor, Lousana, Hay Lakes, Raven and Veteran. Byemoor and Lousana fairs were held in conjunction with agricultural fairs under provision of the fairs board.

The Byemoor fairs were held on the same day, and the Lousana fair on the first day of the agricultural two-day fair, the latter arrangement proving more satisfactory.

Weather conditions were better than usual this year for holding fairs, but this also had the effect of reducing adults' attendance due to the rush of harvest and threshing.

During the spring months the schools of the following centres were visited: Cochrane, Dog Pound, Carstairs, Sylvan Lake, Three Hills, Elnora, Lousana, Huxley, Hay Lakes, Springwater, Byemoor, and Scollard. Generally speaking, there was good interest in fair work. This being largely dependent on the enthusiasm of the local officers, and the attitude of the school inspector toward the work.

The work is making steady growth and is becoming very popular. There are a number of prospective new centres under consideration.

The following tabulation gives particulars regarding each fair centre and a list of the winners of short course scholarships who will attend the 1929 short course.

Fair Centre	Total Exhibits	Pupils taking seeds	School Winning Dept. of Agric. Diploma	School Winning Dept. of Educ. Diploma	Winners of Scholarship Short Course
Byemoor	236	96	Rustle	Rustle	George Jamieson
Carbon	671	228	Gamble	Berkley	Janet McCrindle
Carstairs	934	282	Carstairs Room 2	Carstairs Room 1	Billie Peters
Castor	982	280	Willow Prairie	Willow Prairie	Ruth Ramsey
Cereal	407	94	Cereal Inter.	Cereal Inter.	Nick Kozak
Clive	945	235	Clive Inter.	Clive Sr.	Myrtle Stull
Cochrane	570	168	Glendale	Glendale	Ernest Pickles
Consort	570	168	Silver Beach	Silver Beach	Mabel Scott
Coronation	1001	279	Onward	Onward	Edward Bergh
Dog Pound	381	85	Mount Hope	Mount Hope	Florence Magnuson
Delburne	608	148	Great Bend Con.	Great Bend Con.	James Tees
Elnora	1098	143	Lake View	Lake View	Dorothea Tompkins
Fleet	522	66	Fleet	Syson	Harold Brant
Hanna	828	377	Grassy Slope	Grassy Slope	Rachel Evans
Hay Lakes	478	423	Swan Hill	Swan Hill	Roy Flewelling
Eckville	777	137	Saima	Eckville Vil. Jr.	Nora Simpson
Huxley	445	178	Acadia	Acadia	Linus Lambertus
Innisfail	441	139	Little Red Deer	Buffalo Creek	Florence Cole
Keoma-Kathryn	1171	192	Kathryn	Hawthorne	George McBain
Lacombe	1015	246	Mountain Grove	Jones Valley	Beulah Buchart
Leslieville	920	263	Blueberry Valley	Beaver Flats	William Ure
Lousana	659	128	Lousana Sr. Room	Lousana Inter.	Leah Austin
Markerville	594	184	Hola	Spruce View	A. Killgren
Mayton	541	244	Poplar Creek	Steadman	Eleanor Kidd
Mountain View	693	162	Jutland	Jutland	Harvey Coulson
Olds	1109	485	Bethton	Samis	Della Coyne
Oyen	1030	373	Nebalta	Fairacres	Frank Meehan
Raven	476	210	Raven	Raven	Dorothy Rehill
Red Deer	1076	241	Horn Hill	Brookfield	Jack McLeod
Scollard	439	98	Scollard Con. Jr.	Scollard Con. Jr.	Hjardis Pearson
Sedalia-Naco	601	130	Naco	Naco	Clarence Lutz
Springwater	832	140	Sentinel Hill	Majestic	Martha Holm
Sundre	792	129	Sundre	Bearberry	Jack Buzzel
Sunnyslope	594	187	Buckeye	Buckeye	Victoria Stankevich
Stettler	505	146	Stewartwyn	Spring Lake	Peter Snow
Sylvan Lake	898	121	Carritt	Carritt	Hilda Stiggins
Three Hills	743	281	Three Hills Vil. Room 4	Gumbo	Jack Allsop
Veteran	600	226	Avonlea	Nose Hill 1s	Esther Anderson

SCHOLARSHIP SHORT COURSE.

As a reward for effort and success in school fair work, one boy and one girl at each fair centre are awarded a scholarship entitling them to spend a week at the School of Agriculture at the expense of the Government. Regular class work, organized sports and a variety of entertainment go to make the week's course very popular. The competition is very keen, thus making the short course a great factor in increasing general interest in the school fair.

The short course for the winners in the 1927 fairs was held August 6 to 11, 1928, when 30 boys and 29 girls were in attendance. To the boy and girl standing highest in general proficiency at each short course a year's scholarship at the Olds School of Agriculture is given.

The winners for 1928 are Jack Jamieson, of Delburne, now in attendance at the O.S.A., and Madeline Jupp, of Consort, who will attend after reaching entrance age. It is interesting to note that Byron Almost, the boy winning the scholarship in 1927, topped the first year class last year and is likely to maintain that position in the second year class this year.

THE ALUMNI ASSOCIATION.

This association is one of the most progressive of its kind, being a real live organization which is doing much good work, silently yet effectively throughout Alberta. During the year 7,400 copies of "The News" have been sent out to members. "The News," published monthly by the association, is a four-page, sixteen-column paper and contains items of the doings of ex-students, along with useful articles.

The year 1928 has been most successful financially. Each year has found a steady increase in membership. The total income for the year 1928 amounted to \$1,127.34. From this a sinking fund was established consisting of a little over \$200, yet leaving a good balance in the bank, and an additional \$100 will be added this year. Two very successful reunions were held during the year.

A considerable increase in membership was gratifying to the executive, but best of all is the wonderful spirit which lies back of the association. It is this spirit that is making the Alumni what it is, a very useful factor in rural Alberta.

The officers of the Association for the ensuing year are: President, Tom Sigurdson, Red Deer; First Vice-President, Harold Phillips, Langdon; Second Vice-President, Mrs. Len. Cooper, Olds; Directors, Mrs. Ray, Carstairs; Miss M. English, Olds; Tom Kilduff, Lloydminster; Alex. Buckley, Gleichen.

BOYS AND GIRLS' SWINE CLUBS.

Two swine clubs were organized and supervised from the Olds School of Agriculture this season by Mr. Phillips, the instructor in animal husbandry. These two were centered at Red Deer and Innisfail, the first having 27 members, who fed 54 feeder pigs and seven purebred pigs. The Innisfail club had 29 members with 58 feeder pigs and six purebreds.

A shortage of feeder pigs of the right age, breeding and type made it difficult to supply all the members in the spring, but this was finally accomplished, as the high quality and uniformity of the carload marketed in the fall testified.

Judging demonstrations were given during the summer at both points, each member was visited at least twice, and a systematic effort made to increase the interest and information of the members regarding the good bacon hog type and the best method of producing it.

During the fall a swine-judging team and a swine demonstration team were trained at each point. A great deal of interest was taken in this matter by both the boys and their parents.

A carload of hogs was shipped from the two clubs to the swine club competition at Calgary in November. This carload took third prize. Single pigs and pairs entered by club members also ranked well. The Red Deer team of boys took second place in the judging competition, and third in the railway competition. The Innisfail team took third in the judging competition and also in the railway competition.

VISITORS.

The O.S.A. experimental work and the shrubs, flowers and lawns attract large numbers of visitors to the institution. During 1928 it is estimated that over 5,000 people visited the experimental plots, farm and grounds. Many of these came long distances, others from districts near the school. The field day was a very successful event, with 500 people present.

WEED CONVENTION.

A convention of field supervisors and weed inspectors was held at the O.S.A. in June. The attendance at this convention was over 100. The program included discussions on weed problems, including identification, control measures and weed legislation. During the growing season several hundred plants were sent to the school, or brought in, for identification. This service at the O.S.A. is rendered by Mr. A. T. Kemp, and is helpful to weed inspectors and farmers.

HORTICULTURE.

Each year something new is added to the already fairly large variety of plants growing at the O.S.A. Small fruits have done particularly well, as heavy yields of strawberries, raspberries, gooseberries, black, white and red currants have been obtained regularly in the past. Such a display attracts considerable attention and indicates great possibilities for the future of the industry in Alberta. The ripening of loganberries and blackberries in 1928, for the second year in succession, is worth noting also. Tree fruits in the form of cherries, apples and crab-apples show a certain amount of promise. Several of the apple and crab-apple trees bore good crops of fruit again in 1928.

VEGETABLE SEED PRODUCTION.

The crop of vegetable seed produced at the O.S.A. was very satisfactory again this year. For the past six years very excellent seed of all the leading kinds of vegetables has been matured at Olds. The quantity and quality of seed produced from turnips, swedes, beets, mangels, carrots, parsnips, salsify, onions, leeks, cabbage, cauliflower and kohlrabi have been successful every year.

THE SEASON AND CROP OF 1928.

The crop season of 1928 was unfavorable up till the latter part of May. The result was an irregular stand with some drowning out and some uneven ripening with frost injury.

The yields of oats on the school farm averaged 75 bushels, wheat 29 bushels, and barley 50 bushels per acre. The wheat graded No. 3, while the oats and barley are a 2 C.W. The yields of hay from the 50 acres averaged better than 1½ tons per acre. The corn and sunflower gave below average stands, and the areas were seeded to oats for green feed. Potato and root crops were good in quality and yield.

DATES OF FIRST SEEDING AT OLDS.

1914 April 17	1915 April 3	1916	1917 May 5	1918 April 12	1919 April 8	1920 May 15	
1921 April 27	1922 April 22	1923 April 13	1924 May 3	1925 April 17	1926 April 16	1927 April 14	1928 April 20

HORSES.

The horses on the farm are kept for working and breeding purposes. There are sixteen head of mature horses and six colts at the present time. They are fair types of Percherons and are useful horses. Four head of horses have been kept in the stable this winter. The others, however, are wintering on the stubble and around the straw piles, and are in excellent condition.

CATTLE.

At the Sharp-Yule sale the imported bull Cambus Hercules 191813 was purchased to head the Shorthorn herd. The bull is a very well-bred animal and a good individual, showing Shorthorn character to a degree; and will, we feel, be the means of improving the herd.

We have in the herd of cattle twelve head of Guernseys. The bull and six females are purebred; the others are grades. There are nine Holsteins in the herd also. The bull and two females are registered; the other are not pedigreed.

SWINE.

There are twelve brood sows on the farm this winter; three of these are Tamworths, two Berkshires, and seven are Yorkshires.

SHEEP.

A very attractive flock of twenty-eight good Shropshire ewes is maintained on the farm.

PRECIPITATION RECORDS AT OLDS SCHOOL OF AGRICULTURE.

Month.	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	Monthly Aver.
January		0.49	0.75	0.60	1.16	0.75	2.05	0.60	0.35	0.65	0.70	0.65	1.15	0.40	0.40	0.76
February		0.66	0.30	0.20	0.25	0.42	0.95	0.30	0.65	1.60	0.32	1.65	1.10	1.30	0.80	0.75
March		0.85	0.60	1.00	0.15	0.05	1.95	1.46	0.25	0.35	1.10	1.75	1.00	0.90	0.60	0.85
April		1.00	0.60	0.75	0.18	1.02	1.63	2.10	2.31	1.29	2.57	1.19	0.61	0.50	1.67	1.18
May		0.92	4.27	5.49	4.86	2.40	1.71	1.40	0.78	0.65	5.37	1.20	0.76	2.39	0.87	2.29
June		3.49	8.09	4.53	1.88	0.76	0.96	0.48	1.57	1.28	5.56	2.02	3.58	2.51	8.91	3.21
July		1.29	7.04	4.51	0.86	0.95	1.36	3.25	4.39	1.66	2.46	5.07	2.30	2.59	1.41	2.74
August		0.58	2.50	8.56	2.44	4.43	0.62	1.82	3.88	4.23	3.88	3.27	3.98	1.66	2.67	3.13
September		1.49	1.25	1.50	2.14	0.69	1.43	0.72	0.67	1.00	0.42	3.58	8.08	3.98	0.30	1.81
October		1.50	0.73	0.93	0.31	0.50	1.05	1.53	0.02	0.60	0.75	1.04	0.42	0.93	0.15	0.69
November		1.70	0.52	0.80	0.65	0.05	1.37	0.20	1.17	0.25	0.01	0.37	1.35	0.92	0.02	0.65
December		1.90	0.02	0.90	0.50	0.59	0.30	0.05	0.65	0.10	1.60	1.10	0.75	0.33	0.20	0.83
Total	13.16	27.42	29.57	16.19	10.05	15.14	15.08	14.93	13.44	22.62	20.05	20.61	24.73	17.51	18.00	18.69

1928

	Maximum	Date	Minimum	Date	Mean	Rainfall	Snowfall	Total	Average per month for 15 years	Total sunshine	Evaporation in inches
January	53	9	-34	1	20.9	.....	4.00	.40	.76	125.9	.....
February	53	9	-18	21	23.4	.....	8.00	.80	.75	158.8	.....
March	65	20	-5	7	28.0	.....	6.00	.60	.85	146.9	.....
April	76	27	7	11	32.9	.....	16.75	1.67	1.18	145.6	.....
May	85	25	24	2	54.6	.....	.....	.87	2.29	318.1	4.73
June	77	25	35	6	52.8	8.91	.....	8.91	3.21	198.8	2.52
July	86	24	39	16	59.3	1.41	.....	1.41	3.74	288.7	3.60
August	85	10	34	13	55.3	2.67	.....	2.67	3.13	253.9	2.63
September	82	3	* 20	25	50.3	.30	.....	.30	1.81	241.5	3.05
October	65	6	9	30	36.2	.08	.....	.08	.69	160.0	.....
November	64	3	9	14	31.8	.....	.....	.....	.65	144.3	.....
December	55	23	-21	2	23.7	.....	2.00	.20	.63	97.0	.....
Total for year	.....	.....	.....	.....	.....	14.24	37.65	18.00	.....	2279.5	16.53

Report of the School of Agriculture, Raymond

(O. S. LONGMAN, *Principal*)

STAFF.

The staff members now engaged at the Raymond School and the subjects they are teaching are as follows: O. S. Longman, B.S.A., Principal, Instructor in Marketing and Farm Management; D. L. Gilbert, B.S.A., English, Mathematics and Horticulture; C. O. Asplund, B.S.A., Animal Husbandry; W. G. Smith, B.Sc., Agronomy and Soils; T. C. McBeath, B.Sc., Science; C. W. J. Haworth, V.S., Veterinary Science; E. A. Baragar, B.S.A., Farm Mechanics; A. McDonald, Dairying; C. W. Giffin, Irrigation; W. Burnett, Carpentry; Miss A. P. Scott, Home Economics; Miss J. Redig, B.H.Ec., Home Economics; Miss H. L. Nye, Millinery; Miss M. E. McMurray, R.N., Home Nursing.

The enrollment for the term 1928-29 is 64 students, divided as follows: First Year Women, 14; Second Year Women, 13; First Year Men, 26; Second Year Men, 11.

The enrollment for the term is lower than that of 1927-28 by about 25 per cent. This decrease is due largely to two causes: first, a small enrollment of first year students in the 1927-28 class which is reflected in a small number enrolled in the present second year; and second, adverse crop conditions throughout the most populated area of the district for two consecutive years. While enrollment is disappointing, I would point out, however, that it represents a very substantial and satisfactory proportion of the population served by the school.

DIPLOMAS AWARDED.

At the conclusion of the 1927-28 term on March 31 the following students were awarded diplomas in Agriculture and Home Economics:

Agriculture.—Russell Boyden, Lethbridge; Ray Bullock, Welling; Marvin Culler, Warner; Clifford Dahl, Raymond; Karl Dahl, Raymond; G. W. Evans, Raymond; Loren Hancock, Raymond; Wm. Harding, Taber; Verdan Larson, Raymond; Kenneth Matson, Magrath; Thomas Minor, Magrath; Hugh McFadden, Coaldale; Vern Peterson, Welling; Edwin Palmer, Barnwell; Clyde Shields, Diamond City; Ray Stevens, Barnwell; Archie Terry, Raymond; John Walburger, Leavitt; Dean Wilde, Welling; Jos. Woolley, Raymond.

Home Economics.—Moralda Archibald, Glenwood; Olive Bullock, Taber; Gertie Dahl, Raymond; Clara Dahl, Raymond; Alice Evans, Raymond; Ivie Jensen, Aetna; Ina Jones, Raymond; Margaret LeBaron, Barnwell; Hazel Matkin, Magrath; LaRue Meeks, Raymond; Delvoir Meldrum, Raymond; Lullah Paris, Raymond; Nellie Palmer, Barnwell; Lyda Peterson, Welling; Lucy Roberts, Raymond; Thelma Smith, Raymond; Leola Terry, Raymond.

EXTENSION WORK.

Due to a reduction in staff, extension work was confined mainly to school fairs, girls' clubs, and young people's pig clubs. A detailed outline of the above activities is given herewith.

SCHOOL FAIRS.

The Raymond School of Agriculture continued its assistance in school fair work the past year. Thirteen centres held school fairs, this being one less than last year. Del Bonita dropped out temporarily. In the spring over 100 schools were visited. These visits proved very helpful, especially to the large number of new teachers who had come into the district during the previous six months.

The thirteen centres in this district are as follows: Cardston, United (Glenwood-Hillspring), Spring Coulee, Magrath, Raymond, Iron Springs, Coaldale, Stirling, New Dayton, Warner, Milk River, Allerston, and Coutts. Splendid weather was encountered during the fair season, and taking everything into consideration, it could be said that the fairs were quite successful.

The following figures denote the school fair totals of the Raymond district:

No. of fairs	13
No. of entries in agriculture and home economics....	4,276
No. of entries in school work	3,848
Total entries	8,124

There is every possibility that two new school fair districts will be organized this spring.

SCHOOL FAIR SHORT COURSE.

The short course for the school fair winners of the previous year was held at the Raymond school from July 9 to 15 inclusive. Twenty-seven pupils attended, 14 girls and 13 boys. The students expressed their appreciation of the course and of the splendid time given them, which consisted of an educational program interspersed with sports.

Elizabeth Conlon and Eugene Marquardson were the school fair scholarship winners, while Elsie Anderson, member of the Warner W.I.G.C., was awarded the scholarship offered by the Department of Agriculture which permitted her to attend any Provincial School of Agriculture with all school expenses paid by the Department of Agriculture.

The object of such short courses is to promote and stimulate an interest in agriculture and household science among our young people, and from our experience we should say that this object has in a great measure been attained.

SWINE CLUBS.

Swine clubs were organized at Raymond and Magrath. Tamworth hogs were used. Owing to the small number of members in each club and to lack of uniformity in size of the feeders, no car-load was shipped this year. Local fairs were well attended and the

quality of the stock was very good. A judging team was trained for the Calgary show. Seventh place was taken in the competition by this team. Other clubs were projected at Glenwood and Hill-spring, but because of inability to get the required stock soon enough these were abandoned.

GIRLS' CLUB WORK.

This work was conducted by Miss J. Redig, B.H.Ec., Instructress in Home Economics at this school. Demonstrations and lectures were given to various junior organizations in the Raymond Agricultural School district from May 1 to September 1. The work was conducted co-operatively under the auspices of the following organizations: Women's Institute Girl Clubs, Canadian Girls in Training, Young Women's Mutual Improvement Association, Junior United Farm Women's Association, and in some instances was undertaken by an ex-student of the agricultural school.

In order to organize these lectures and plan an itinerary a circular letter was sent to active organizations in the various communities offering a series of lectures and demonstrations. This offer met with general favor and numerous applications were received.

All local expenses were borne by the local organization, while railway fare, and the equipment necessary for the demonstration, lectures or programs were furnished by the Department of Agriculture.

The object of the programs was to acquaint the girls and other members of their families with the type of work which is being conducted at the Raymond School of Agriculture. By bringing the demonstrations to these various organizations we were acquainting them with the practical nature of the work given at the Schools of Agriculture, and also stimulating a desire for further knowledge along similar lines. In every district there was a very favorable attendance. For the evening program the agricultural school films were of interest to both old and young.

Many obstacles presented themselves and had to be overcome. In the spring the girls attending school were busy with their examinations, chautauqua, stampedes, agricultural fairs, picnics, and conferences interfered with the work, so that appointments had to be so arranged as to avoid these in each particular locality. Inclement weather was the cause of a few cancellations of appointments.

An outline of the course given is as follows: three visits were planned to each point, one each month. The demonstrations were:

1. An afternoon demonstration on Milk and Eggs. An evening program: (a) Lantern slides on Interior Decoration; (b) Film of School Fairs; (c) Film of Agricultural Schools.
2. Salads, a demonstration. Canning, a demonstration.
3. Use of Left-overs, a demonstration. Also table-setting and serving.

Following are the points visited and the approximate average attendance:

Cardston, 35; Leavitt, 18; Mt. View, 25; Woolford, 75; Glenwood, 45; Hillspring, 30; Magrath, 25; Raymond, 15; Stirling, 18; New Dayton, 43; Warner, 30; Milk River, 25; Coutts, 35; Barnwell, 20; Taber, 10; Grassy Lake, 25; Bow Island, 20; Walsh, 50; Aetna, 20.

SUPERPHOSPHATE FERTILIZER.

Co-operative experiments with superphosphate fertilizer supplied by the Consolidated Smelters, Trail, B.C., were conducted throughout the district. While these tests were largely preliminary in nature, the completed tests showed an increase in yield. The fertilizer was sown with wheat by means of a specially constructed seed drill at a rate of 49 pounds per acre. Further tests will be conducted for the purpose of establishing the value of this fertilizer.

SCHOOL FARM.

Feeding Experiment.

Beginning January 25th and continuing for the succeeding 84 days, a test was carried out with 16 heifer calves to compare the value of sweet clover ensilage and wet sugar beet pulp in a fattening ration. The calves were divided into two groups. The ration consisted of alfalfa hay, oats, and barley, in the proportion of three of barley to one of oats and beet molasses (self-fed); one group received wet beet pulp and the other received sweet clover ensilage in addition. Gains were satisfactory; the pulp group made an average daily gain of 1.92 pounds and the ensilage group a gain of 1.65 pounds. The calves went on feed at an average weight of 580 pounds.

The test indicated that slightly better gains at a considerable reduction in cost may be made by using pulp in place of ensilage as the succulent feed in a ration where pulp may be conveniently obtained. One other point of importance is brought out by this test, viz., that the pulp-fed calves had a considerably greater shrinkage in shipment than those fed ensilage. The shrinkage on the pulp-fed calves amounted to approximately 3.6 per cent. of the total weight at point of shipment, while that on the ensilage-fed group amounted to only 1.8 per cent. The significant fact here is that pulp is an extremely bulky wet feed and somewhat laxative in nature, which tends to increase shrinkage, especially on long hauls.

Six steers, fed a ration identical with the pulp group, made during the 84-day period an average daily gain of 2.44 pounds and shrank approximately 2.6 per cent.

Crops.

The excessive precipitation in the fall of 1927 made any fall work impossible. The effects of the above condition were accentuated by a very dry April and May, which put the land in a very unsatisfactory working condition for sowing crops.

Sugar Beets.

Twenty acres of sugar beets averaging seven tons to the acre were harvested. These were grown on the same ground as produced a beet crop the previous year. The low yield was a result of

poor germination, due to the dry condition of the soil at seeding time and later to drowning out and root-rot due to excessive rain in June. Excellent harvesting conditions prevailed. Six men using eight horses harvested the beets at the rate of one acre per day.

Spring-sown Cereals.

Due to the lack of precipitation in May the spring-sown cereals germinated very unevenly, except where sown on summer-fallowed land. Much second growth was present in the crops, which delayed harvesting and impaired the quality of the threshed crop. Wheat, oats and barley were grown and produced average yields of 40, 50 and 25 bushels per acre respectively.

Alfalfa.

The first cutting was seriously injured by heavy rains. Most of the second cutting was of good quality. The crop was irrigated between the first and second cuttings.

Sweet Clover.

Fifteen acres of sweet clover pasture successfully carried 90 sheep and 25 head of cattle, also some horses for a period of four months beginning June 1. In addition to this approximately ten loads of ensilage were cut from this field, and a fairly heavy crop of clover turned under. Eight acres of sweet clover yielded approximately 80 tons of ensilage. Sweet clover is giving excellent results as a pasture crop, and although it is somewhat difficult to ensile, it makes a fair grade of ensilage if properly packed.

PREPARATION OF LAND FOR CROPS, 1929.

Fifteen acres were summer-fallowed and seeded to fall wheat, August 20, an excellent stand being obtained.

Twenty-five acres of sweet clover land were fall plowed deeply, irrigated, and worked down for beets in 1929. The short rotation which we have established here, and which is working out to good advantage, consists of a grain crop (which is seeded to sweet clover), sweet clover (plowed in fall) and sugar beets.

LIVE STOCK.

Holstein Cattle.

The herd consists at present of 15 cows, 14 heifers under two years, and the herd bull. The herd has produced a substantial income during the year. No R.O.P. work is being done here, but we are making private tests. During the year we have acquired four more registered Holsteins, but unfortunately lost as many by death. Our heifer stock is especially promising.

Horses.

The original three Percheron mares have increased until at the present time we have eight head. This year we have two promising male colts sired by Job. Recently we have acquired nine head of Clydesdales, including five mature mares, one two-year-old mare and three two-year-old geldings. There is some very promising young stock among these animals.

Sheep.

The flock now consists of 44 mature Oxford ewes, 26 ewe lambs and the flock sire. We consider this flock a very superior one. Our increase this year was 135 per cent. The wool clip showed an average fleece of better than 12 pounds. Nine excellent ram lambs were sold for an average price of \$30. The gross earning for the year, including the sale of 9 ram lambs, 13 wether lambs, 8 aged ewes and wool, amounted to approximately \$720. Very little time was required in the care of the flock, and it wintered entirely on crop aftermath. A small amount of hay and grain was fed during and immediately preceding lambing. The flock has proved very effective in the control of weeds along ditch banks and in waste places. Altogether, sheep have been our best source of revenue and constitute a valuable asset.

Swine.

All the breeding stock was disposed of this year on account of a tuberculosis outbreak. This was considered advisable in order to permit a thorough cleaning up of the hog yards. We have recently received a shipment of six Tamworth sows, which are being bred to farrow in the spring.

Under the direction of the Provincial Veterinarian an experiment with the Calmette vaccine for the prevention of tuberculosis in hogs was carried out during the summer. Twenty hogs were involved in the test. This experiment required special yarding to isolate the animals under test.

Poultry.

We are making gradual improvement in our poultry. We have at present 60 White Leghorn pullets which we bred from our own stock. These produced during December at the rate of 66 per cent. We are trap-nesting in order to select some of our best pullets for breeding purposes later on.

PRECIPITATION RECORDS, RAYMOND SCHOOL OF AGRICULTURE
1921-28 INCLUSIVE, SHOWING INCHES OF RAINFALL

	1921	1922	1923	1924	1925	1926	1927	1928	Aver.
January	.60	.80	1.13	1.25	.60	.67	.31	.50	.73
February	.80	.50	.60	.90	.10	.20	1.50	1.10	.71
March	1.52	.85	.65	.42	.15	.20	.52	.90	.65
April	.94	3.44	.80	1.02	2.25	.67	2.40	.85	1.55
May	1.61	1.16	2.34	1.21	.55	.57	8.49	.50	2.05
June	.57	2.31	7.10	4.83	3.28	4.03	2.10	6.45	3.83
July	3.63	2.88	2.35	.34	.85	.72	2.90	4.08	2.22
August	.45	.10	.83	2.66	2.13	1.18	1.56	1.92	1.35
September	1.30	.52	.39	.81	4.68	2.61	3.30	.02	1.70
October	.15	.71	.22	.69	1.17	.00	.60	.77	.54
November	.36	.55	.37	.97	.07	.78	2.30	.50	.74
December	.75	.65	1.05	.10	.70	.67	1.15	.45	.69
Total.....	12.68	14.47	17.83	15.20	16.53	12.30	27.13	18.04	16.76

Report of the School of Agriculture, Vermilion

(W. J. ELLIOTT, *Principal*)

GENERAL CROP CONDITIONS.

The crops of the district which promised so well late in the summer were reduced in value by almost one-half due to late summer frosts. Although the frost came so late that it did not interfere so much with the bulk of the yield, the grade of practically all grain was reduced so seriously that the wheat was little more than feed. Although the yield of oats was not seriously reduced in many cases, yet the many samples tried would indicate that the germination will be low, and great care will need to be exercised for the seed oats next spring.

WEATHER REPORT—TEMPERATURES.

The following table indicates the average maximum and average minimum temperatures during each month of the year, for 1926, 1927 and 1928, together with the highest and lowest temperatures recorded during each month for the above time.

Month.	Average Daily Maximum			Average Daily Minimum			Highest Temperature			Lowest Temperature		
	1926-1927-1928			1926-1927-1928			1926-1927-1928			1926-1927-1928		
January	20.3	11.8	.....	2.5	— 9.6	.....	42	39	.....	—29	—40	...
February ..	22.9	13.2	27.8	2.7	—12.0	5.6	54	33	48	—29	—38	11
March	34.8	32.7	32.2	.....	14.0	11.0	49	45	62	.....	— 8	15
April	47.6	45.6	42.0	.....	23.7	21.5	79	63	79	.....	— 5	7
May	64.8	58.0	70.3	38.0	35.6	38.2	81	73.5	92	23	25	22
June	67.3	71.0	65.8	42.9	45.1	42.8	93	84	84	34	30	35
July	78.2	73.8	73.1	49.3	49.7	49.0	94	87	89	39	32	39
August	76.6	75.9	67.3	49.3	45.8	40.9	85	86	91	32	35	31
September....	71.4	60.9	65.4	46.4	39.6	28.5	70	80	86	15	24	9
October	49.3	53.9	45.6	23.2	26.9	23.0	74	75	61	11	10	2
November.....	26.6	17.8	39.3	5.3	— 3.1	13.6	55	43	53	— 2	—36	1
December....	13.7	4.0	27.6	— 7.4	—15.6	2.5	42	38	44	—36	—44	—37

PRECIPITATION (SNOW AND RAIN) BY MONTHS FOR 1926-27-28.

Rainfall in inches.				Rainfall in inches.			
Month.	1926-1927-1928			Month.	1926-1927-1928		
January	.50	.10	....	July	1.93	6.66	5.17
February	1.90	.10	....	August	4.84	1.70	1.25
March	.20	.10	.10	September	1.00	3.25	.77
April	.33	2.36	.60	October	.30	2.60	.20
May	1.81	1.12	1.52	November	.90	2.75	....
June	2.55	2.00	2.31	December	.80	.45	.10
				Total	12.02	28.19	12.92

It will be noted that the rainfall of 1928 is practically that of 1926 and is only about half of that of 1927. The significant fact, however, is that of the total of 12.92 inches, 10.25 inches, or 79.3 per cent., fell in the months of May, June, July and August. The opportuneness of the rain during the harvest months accounts for the abundant crop promise until the frost came.

SUNSHINE RECORD.

This table gives the total sunshine per month during 1926, 1927 and 1928, with the daily average for the corresponding years and months.

SUNSHINE TABLE.

Month.	Total hrs. per month. 1926-1927-1928.			Month.	Total hrs. per month. 1926-1927-1928.		
January	87.7	115.4	.....	July	291.7	262.8	292.3
February	89.0	145.1	132.0	August	184.5	290.8	264.1
March	198.9	136.4	137.4	September	104.0	171.5	236.2
April	186.2	226.9	163.8	October	121.2	110.9	123.7
May	199.0	181.1	295.6	November	51.6	66.4	137.9
June	250.1	264.1	195.0	December	97.3	86.3	69.7
				Total.....	1861.2	2057.7	2155.2

Assuming that the sunshine for January, 1928, was the average for 1926 and 1927, which would be 101.5 hours, this would give 2155.2 sunshine hours for 1928, or 97.5 hours more than 1927 and 301.1 hours more than 1926. If we take the crop months only, that is, May to and including September, we find that 1928 has 1283.2 hours, 1927 has 1170.3 hours, and 1926 only 714.9 hours. It is rather an astonishing thing that the crop months for 1928 have 112.9 hours more sunshine than the same months in 1927 and 568.3 hours more than in 1926.

We have taken from the above the average daily hours of sunshine for the various months of 1926, 1927 and 1928. This table is as follows:

Month.	Average Daily Sunshine. 1926-1927-1928			Month.	Average Daily Sunshine. 1926-1927-1928		
January	2.8	3.7	....	July	9.4	8.4	9.4
February	3.1	5.1	4.5	August	5.9	9.3	8.5
March	6.4	4.4	4.4	September	3.4	5.7	7.9
April	6.2	7.5	5.6	October	3.9	3.5	4.1
May	6.2	5.8	9.5	November	1.7	2.1	4.4
June	8.3	8.8	6.5	December	3.1	2.7	2.4

If we estimate the January sunshine for 1928 at the average for 1926 and 1927, viz., 3.2 hours, then the average daily sunshine for 1926, 1927 and 1928 is 5.0 hours, 5.58 hours and 5.87 hours. But what will perhaps be of more interest in connection with the growing crop is the average sunshine hours per day for the crop months. From May 1 until September 30 for 1926, 1927 and 1928, the average hours of daily sunshine are 7.92 hours, 7.6 hours and 8.36 hours, or to convert this into approximate hours and minutes it means that the crop months for 1926 had 7 hours and 55 minutes, 1927 had 7 hours and 36 minutes, and 1928 had 8 hours and 21 minutes. Thus 1926 had an average of 19 minutes more sunshine per day over 1927, and 1928 had an average of 26 minutes more than 1926.

AGRICULTURAL SCHOOL ATTENDANCE.

During the past fall (1928) we are again pleased to report a substantial increase in attendance, as we have a total registration of 176, made up as follows:

Third Year Girls	6
Third Year Boys	5
Second Year Girls	11
Second Year Boys	32
First Year Girls	45
First Year Boys	72
Boys taking two years in one	4
Girl taking two years in one	1
Total.....	176

Total attendance in the three preceding years was as follows: 1925, 91; 1926, 130; and 1927, 149.

THIRD YEAR.

A third year course was initiated this term for graduates of the school who may desire another year of general training, or who may wish to go on to the University for advanced work. We had 20 registered for this course, but the frozen crops affected the attendance just as with the rest of the course, and as a result 11 students finally entered. This work is proceeding nicely under F. B. Dixon and J. A. Perrie.

THE NEW DORMITORY.

As the Vermilion School was enjoying an attendance never before reached in the history of the institution, room and board in the homes in the town became a very acute problem. We had reached our limit of growth unless additional accommodation could be provided. As a result, the Legislature appropriated the necessary funds for the erection of a splendid dormitory.

The dormitory has moved us from the position of a small school up into the place of a real institution, with a school life and with student associations that cannot help but be beneficial to every boy and girl who returns to the farm with a desire to raise the standard of life, health and living for all in his or her community. It will be hard to measure the helpful associations formed here among the boys and girls, and the resultant good that will accrue to the Province.

MEDICAL ATTENTION.

The school collected \$3 from each student at the beginning of the term. Dr. Knoll contracted to look after the student body as far as general illnesses are concerned and to give each one a medical examination on entering. These records are all on file. The results are very satisfactory so far. It is hoped that the medical fee will care for the doctor's contract and the prescriptions required during the year.

EXPERIMENTAL PLOTS.

The plot work has not developed into anything very elaborate so far. The main work consisted of variety tests of wheat, oats, barley, peas, flax and rye, also comparative yields with vegetables, legumes and grasses. The main purpose, aside from comparative yields, is to grow material suitable for classroom purposes. As far as possible the plots were carried out in duplicate, so that the results have some significance, but such results are only valuable in proportion to the period over which the tests have been conducted. Some interesting data on the comparative yields of wheat varieties are being secured, 17 varieties having been grown in 1928.

Eleven of the common varieties of oats were included in the year's tests. The oats, generally speaking, were good, marketable grain. In the average yield for three years, Banner stands at the top with 135.1 bushels, followed by Gold Rain 125.6 bushels, Victory

121.6 bushels, Abundance 113.4 bushels, Leader 112.4 bushels, and O.A.C. 72 with 110.9 bushels. All others are under the 100 bushel yields.

In the barley variety tests over a three year period Manchuria stands at the head of the list with 74.7 bushels, followed by Canadian 6-Row with 73.6 bushels, Canadian Thorpe 70.6, and Mensury 70.5 (one year).

One variety of spring rye was seeded in 1928, and yielded 25 bushels per acre. It was grown on fallow land and produced fairly well.

Two years' tests with flax indicate an average yield of close to 22 bushels for Crown, Premost and Wilt Resistant No. 52, with a slightly higher yield of 25 bushels for Common.

Last year a number of varieties of field peas were grown in small plots. These did well, the seed matured and was used on the regular plots during the past summer.

One variety of buckwheat, the Silverhulled, grew well and matured, producing 30 bushels per acre. This variety will be tried again in 1929.

Three rows of sweet clover, six of red clover and two of alfalfa were tried in 1926. The sweet clover and some of the red clover did well, but the alfalfa seemed to kill out badly. These same varieties have been grown in 1927 with a view to selecting those that may be included in comparative tests. During the summer of 1928 these varieties did well. Practically all were cut a second time. The tonnage for the sweet clovers is very satisfactory, while that for the alfalfa, and especially the Grimm variety, was very good indeed.

Western Rye grass continues to be well suited to this district, while Timothy and Red Top have done well for 1928.

For the first time in several years we had very good crops of millet on the test plots. Small plots of 1/100 acre each were grown in 1928, giving satisfactory results, as did also the varieties of sorghums.

CLOVERS AND GRASSES SOWN 1928.

A number of additional 1/100 acre plots of clovers and grasses were sown during 1928. The season was very favorable to such seeding.

Five varieties of fodder corn, seven of mangels and seven of turnips, were included in the 1928 tests.

An extensive series of tests was conducted to determine the germinating qualities of vegetable seeds purchased from a number of seed houses for distribution to school fairs.

A start was made with vegetable seed production in 1927 with parsnips, carrots, beets, turnips and cabbage. Some home-grown seeds were tried out in 1927 and this was repeated in 1928, when turnips, carrots and parsnips compared very favorably with similar seeds purchased on the market.

FRUITS.

Raspberries, which are our oldest established fruit, yielded well again during the past summer. New canes were set out during 1927, and these bore their first crop during 1928. So far the yield does not compare with our old, unnamed variety, which seems to be an excellent bearer. However, as the new varieties become established we hope for better results.

Red, white and black currants were set out during 1927. All of these varieties are named, and while they produced a few berries this year, yet we are looking for still better returns during 1929.

Ground cherries again produced an abundant crop. Plum trees again bore abundant blossoms and later some fruit. It seems strange that plum trees seem to do best when they kill back and make a second scraggly growth. The plums are all produced on spikes near the ground. As yet no fruit has appeared on the crab or apple trees, although one crab tree had quite a showing of bloom. We hope still to add gooseberries and strawberries to the fruit section.

ALUMNI ASSOCIATION.

The Alumni Association is becoming an important factor in the life of the school, both as a means of keeping in touch with the old students and in assisting us to enroll new ones.

Several copies of "The Radio", the official paper, were published last year, and were enjoyed by the members. During August we had a summer reunion with about 75 present.

SCHOLARSHIPS.

Four students are attending the school this winter under scholarship arrangements. Elma Gudlaugson, from Grande Prairie, is taking the straight agricultural course. Because of the fact that she stood second in her class at the close of the year, Mr. Hoadley presented her with a scholarship covering her second year at the school. From the school fairs of last year two scholarship winners are attending classes, one in household science and the other in agriculture. Helen Hanson, of Friedenstal, stood highest in the girls' work, and Wm. Elgie, of Minburn, highest in the boys' work.

Rupert Fearnley, of Gibbons, was the scholarship winner at the U.F.A. young people's week at the University, and elected to come to Vermilion, where the U.F.A. are caring for his scholarship.

THIRD YEAR.

For the first time the Vermilion School of Agriculture undertook to give a third year course, which covers very much the same ground as is covered by the High School eleventh grade, and gives our graduates the necessary credits for entry to the University. Mr. F. B. Dixon was placed in charge of this course, with Mr. J. A. Perrie as assistant. Eleven students have registered for the first year, six girls and five boys. We hope as the school advances that more and more students may take advantage of the work given, as it opens up the way for advanced work if the student wishes to go on.

THE LIBRARY.

Mr. Malaher has continued to give his personal attention to the library. Some 300 volumes were added during the year, and the library now includes about 1,500 volumes in all. This department has been moved to the new quarters in the dormitory, where we have commodious quarters and well-lighted reading tables. We hope in time to use the library as one of our extension facilities, whereby ex-students or others might have the use of the books, which could be sent by mail.

LEGUME CULTURES.

Legume cultures were again produced during April, May and June of 1928. The main cultures produced covered sweet clover, alfalfa, field peas, red clover, white Dutch clover, vetch, sweet peas, beans. The production was very close to that of 1927. The total cash returned to the Department was \$970.90, and as the culture cost approximately 13 cents per bottle it represents a profit of \$610.28.

SCHOOL LAWN.

The town of Vermilion has presented the Government with an area of land lying directly east of our property that may be added to the lawn with considerable advantage. The size of the lawn is now such that it will require the services of a gardener.

EXCURSIONS.

During the summer we organized several excursions from farmers' organizations and from districts surrounding the school. Some six parties in all came and enjoyed the day in looking over the experimental plots, the stock, farm, and particularly the new dormitory. We feel that these excursions did considerable to advertise the school, and they certainly helped us to become acquainted with a larger circle of friends of the institution. We hope to extend these next summer.

EXTENSION WORK.

We have two main lines of extension work from this institution, one the school fairs and the other pig clubs and assistance in the way of poultry and sheep promotion. Mr. Andrew has had direct supervision of the latter, while Mr. Heckbert has had charge of the former.

The following is an extract from Mr. Andrew's report on the extension work, of which he was in charge:

"Low prices for hogs and high-priced feeds united in bringing about conditions adverse to the swine industry in 1928. In spite of these conditions, however, our boys and girls' swine clubs at Vermilion and Mannville made satisfactory progress. At each point there was an increase in membership and a fairly keen demand for breeding stock. The complete program of instruction, exhibiting of pairs of bacon hogs and judging competition was held at each point. Later shipments were made to the swine club show at Edmonton.

"The Vermilion boys and girls' swine club was successful in winning the C.N.R. competition. Norman and Ray Williams, members of the club, received free transportation to the Royal Fair at Toronto, where they entered into competition with other teams similarly chosen for the Dominion championship. In this they were not successful, but their winnings and their rewards have aroused much local interest and should be of great benefit to the club in future years.

"The Mannville club shipped one-half car of hogs and received the highest score awarded to a half-car in the Province. In other competitions the Mannville judging and demonstration team made a creditable showing. This club is making substantial progress, and will no doubt continue to do so in 1929.

"During the autumn of 1928 five purebred Yorkshire boars, loaned by the Dominion Department of Agriculture, were placed at the disposal of club members. In addition to these, others were purchased from Alberta breeders of Yorkshires, including the School of Agriculture farm at Vermilion.

"There is a marked increase in interest in the sheep-raising industry. Taking advantage of this, we have been able to assist farmers in purchasing flocks, and also in securing purebred rams of good type. We have been able to sell all the choice Oxford rams bred at the school farm, and have located rams for purchasers desiring other breeds.

"High prices for beef cattle have stimulated interest in breeding stock. As a result we have been able to sell locally all young bulls reared at the school farm. We have further been of assistance to the cattle-men of the district in bringing buyers and sellers of breeding stock into contact on numerous occasions.

"Poultry extension has received the attention which its importance merits. The local Poultrymen's Association distributed last spring 7,500 White Wyandotte baby chicks from accredited flocks. In November surplus cockerels, having been crate fattened, were killed and dressed and marketed co-operatively. The returns were highly satisfactory.

"These high-grade flocks are proving to be of value in distributing breeding stock and eggs for hatching to neighboring farmers."

Following is the report covering school fairs in the Vermilion, Edmonton and Peace River districts, of which Mr. Heckbert has had direct supervision:

"We were able to increase our fairs to an operating total of 37, a gain of 13 fairs over last year. Five new fairs were held in the Peace River country, four new ones were organized and carried through successfully in the Edmonton district, while three were added in the Vermilion area.

"Considerable work was done towards consolidating our old established fairs, making them more efficient in the objects towards which they work. The financial standing of all our school fairs is now the best it has been, and no difficulty is presented due to shortage of funds, a condition that seriously retarded the expansion of this phase of extension work up until two or three years ago.

"Only one school fair, that at Ranfurly, failed to operate, frost damage to vegetables and flowers being given as the reason for the withdrawal of this fair.

SCHOOL FAIR SHORT COURSE.

"The annual scholarship short course was held at the Vermilion School from August 9 to 16, and was attended by 58 boys and girls. The term scholarships were won by Helen Hanson, of Waterhole, in the Peace River district, and William Elgie, of the Minburn school fair. Both these students are now in attendance at this school, and are apparently making splendid use of the opportunity afforded them.

"I should like to take this opportunity of expressing my appreciation of the services of Mr. Malaher and Mr. Dixon, who rendered faithful assistance in the conduct of the work in the Edmonton and Peace River districts. Other members of the staff of the school also greatly assisted through their co-operation in the shipments of seed and supplies and in acting as judges at the fall school fairs.

"The visiting of schools by staff members before school closing in June has had a splendid effect on the school fairs, while the talks given the children on completion of the judging in the fall have also pointed the way to greater uniformity and efficiency in preparing and showing exhibits.

"For 1929 our expansion will not, perhaps, be as great as in the past year, but excellent fairs are anticipated at approximately forty school fair centres."

THE STAFF AND ITS SUMMER WORK.

W. J. Elliott—General supervision of all departments, some care in connection with the dormitory, and working for new students for following term.

J. F. Andrew—Supervision of school farm, pig clubs, sheep and poultry encouragement work. Helped with short course. Judged at fairs.

S. C. Heckbert—Supervision of school fairs and organization of new fairs, also organization for summer short course, and school fair judging.

W. G. Malaher—Edmonton district school fairs, library, assisting at short course and judging at school fairs.

B. J. Whitbread—Experimental plots and assisting with short course.

F. B. Dixon—Care of school fairs in Peace River and judging at same.

Miss Edwards—Visiting schools in interest of school fairs and judging at same.

Miss Shaw—Girls' clubs, assisting at short course and judging at school fairs.

THE PRESENT STAFF.

W. J. Elliott, B.S.A., Principal and Instructor in Civics and Farm Management; J. F. Andrew, B.S.A., Farm Manager and Instructor in Animal Husbandry; S. C. Heckbert, Instructor in Mechanics; J. E. Edgar, B.S.A., M.Sc., Instructor in Science; W. G. Malaher, B.S.A., Instructor in English and Mathematics; B. J. Whitbread, B.S.A., Instructor in Agronomy; F. B. Dixon, Mathematics and supervision of third year course; J. A. Perrie, assisting with third year course, English, History, Composition, etc.; A. D. Sharpe, Assistant Instructor in Blacksmithing; E. Cormack, Instructor in Dairying and drill work; Dr. Haworth, Instructor in Veterinary Science; Miss Ferne Edwards, Instructor in Cooking; Miss M. P. Shaw, Instructor in Household Economics; Miss B. Williams, Instructor in Cooking; Miss F. E. C. Reid, R.N., Nurse; Miss L. Reid, Matron and Dietitian.

I wish in closing to commend the faithful work by the staff at this school. On the whole, we have had the most loyal support and sympathy from all, without which the successful operation of the school would not have been possible.

Report of the Dairy Commissioner

(C. P. MARKER)

GENERAL.

The high lights of Alberta's dairy industry for the year 1928 in comparison with the returns for the year 1927 may be briefly stated as follows:

On the one hand, we note an increase in the average milk production per cow, an increase in the output of farm dairy butter, an increase in the number of milch yearlings, an improvement in the quality of creamery butter by reason of a larger proportion of high-grade cream having been furnished to the creameries, and finally, higher price levels for all dairy products.

On the other hand, we note a decrease in the number of dairy cows, in the total milk production, in the total value of dairy products, in the output of creamery butter, and in the output of factory cheese.

These conclusions have been drawn from, and based upon, statistical and other information gleaned from many sources. Some of the details will be discussed briefly in the following paragraphs.

The prices for butter and cheese were higher in 1928 than at any time since the peak year, 1920. This may be said to apply to dairy products generally—the increase in value helping to offset to a considerable extent the decreased output. The lower milk production was primarily due to a considerable number of dairy cows having been disposed of for beef at attractive prices, and there can be no doubt that the early season's prospects of a very promising wheat crop was an important factor in the partial depletion of many of the small herds. The figures which we have covering the cream supply to the creameries from month to month give indications in that direction. We find, for instance, that the cream supply for the first four months of the year was 28 per cent. below that of the corresponding period of 1927. The corresponding decrease for the month of May was 6.3 per cent., for the month of June 9.5 per cent., for the month of July 12.6 per cent., for the month of August 10.6 per cent., and for September 15.8 per cent. In sharp contrast to these figures we find that the decrease for the month of October was but 1.2 per cent., and for the months of November and December the increase was 26.3 and 43.0 per cent. respectively.

No doubt the milder weather during the fall months had something to do with the relative increase in production, but it is equally certain that the effect of the August frost on the grade and market value of the wheat crop brought available dairy cows into commission and swelled the cream receipts at the creameries.

The following table gives a general view of the comparative production and value of dairy products for the past two years.

ALBERTA.

VOLUME AND VALUE OF DAIRY PRODUCTS, 1928 and 1927.

Product.	1928	Pounds.	Price, cents.	Total Value.
Creamery Butter (100 Creameries)	14,375,636	37.38	\$ 5,374,456	
Factory Cheese (9 Factories)	722,048	21.94	158,404	
*Other Dairy Products (Estimated) .....	.....	.....	14,817,140	
Total Value.....			\$20,350,000	

*Including milk and cream for direct consumption, ice cream, home-made butter and cheese, skimmed milk and buttermilk.

Product.	1927	Pounds.	Price, cents.	Total Value.
Creamery Butter (100 Creameries)	16,179,712	35.63	\$ 5,765,347	
Factory Cheese (9 Factories)	848,511	20.12	170,690	
*Other Dairy Products .....	.....	.....	14,813,968	
Total Value.....			\$20,750,000	

*Including milk and cream for direct consumption, ice cream, home-made butter and cheese, skimmed milk and buttermilk.

MILK PRODUCTION.

According to the census report for 1926 there were then 77,130 farms in Alberta, and of these 59,848, or 77.5 per cent. reported milch cows. It is further reported that in June last there were 344,495 milch cows in Alberta, this being 9.5 per cent. less than the number reported for 1927. Estimating that 75 per cent. of the cows reported were actually milked, it would appear that their average production was approximately 3,950 pounds of milk and 150 pounds of butterfat for the year. This average is slightly higher than that reported at the last census, but since most of the dairy cows disposed of for slaughter last year were not heavy milkers, it follows that the proportion of comparatively heavy milkers in the remaining total would materially increase the average annual milk yield.

In order to localize for the purpose of comparison the number of dairy cows kept on farms and the output of the dairy products of which records are available, the map of the Province may be divided into a southern, a central and a northern section, as follows:

The southern section extending from the International border to a line running east and west and drawn through a point just south of Bowden. This area includes census divisions 1 to 6.

The central section extending from the line just described to a line running east and west drawn through a point just north of Millet. This section includes census divisions 7, 8 and 9.

The northern section includes the territory beyond the northern limit of the central section just described, and includes census divisions 10 to 17.

The distribution of the number of farm milch cows reported for 1928 will be as follows, according to the information available and the plan just outlined:

Southern section	116,105 or 33.7%
Central section	99,190 or 28.8%
Northern section	129,200 or 37.5%

The business of milk production in Alberta in the matter of volume may be considered under three general heads, or as being carried on by three more or less well defined groups of producers.

The first group comprises the specialist dairymen who operate in the territory tributary to our cities, towns and villages, and who produce milk largely for disposal in the fluid milk and cream trade. The milk production in this group is fairly uniform and stable throughout the year, though there are, of course, periods of surplus production in this particular trade. The dairy herds are of a comparatively good size and are generally well housed and cared for.

The second group may include the farmers in general who regard their dairy operations as being an important branch of their farm enterprise. These are the people who dispose of the bulk of their cream and milk to the creameries and cheese factories operating at various points throughout the Province, and may be properly regarded as the backbone of the industrial phase of dairying. They are instrumental in keeping the dairy factories in operation throughout the year and thereby providing a regular cash market for milk and cream at all times. In other words, the dairyman in this group follows a diversified scheme of farming for which the greater area of Alberta is so admirably adapted.

We may include in the third group farmers whose dairy operations are merely incidental to their general and major line of business of growing grain and live stock for market. They milk a few cows, primarily to provide dairy products for their households and for the rearing of young live stock. Any small seasonal surplus is usually marketed in the form of cream shipped to creameries, or made into dairy butter for a local market. There is little doubt that the decrease in the creamery butter production for the past year is largely due to milch cows in small herds being disposed of for beef.

CREAMERIES AND CHEESE FACTORIES.

One hundred creameries were operated in the Province during the year. Plants were put into operation for the first time at the following points: Bassano (W. A. Brodie); Clandonald (P. Burns & Co., Ltd.); Derwent (The Derwent Creamery); Elk Point (Elk Point Creamery, Ltd.); High Prairie (Woodland Dairy of High Prairie, Ltd.).

The creameries which had been operating at five other points did not re-open during the year, namely: Berwyn, Duchess, Elkton, Lethbridge (P. Burns & Co., Ltd.), and Sunnyslope.

Cheese-making had been discontinued by the factories at New Sarepta, Hay Lakes and Edmonton (Woodland Dairy Limited), leaving a total of nine in operation as against twelve for the previous year.

LICENSES ISSUED UNDER THE DAIRYMEN'S ACT.

There were issued during the year 18 Milk and Cream Testers' licenses in Form A, 193 Graders' and Testers' licenses in Form B, and 109 Dairy Factory licenses in Form C, under the provisions of The Dairymen's Act and Regulations—the total license fees amounting to \$967.00

Twenty-six permits were also issued under Section 43 of the Act, covering the transfer of cream under specified conditions, from one creamery to another for manufacture.

GRADING OF CREAM.

The Provincial Cream Grading Service, which has been in operation since May 1922, was continued during the year, in response to a resolution passed by the annual Provincial Dairy Convention held at Calgary in February.

Owing, however, to the somewhat decreased cream supply it was felt that the objective of the work could be satisfactorily served with a smaller staff of Provincial graders. The Dairymen's Advisory Committee on Cream Grading, and the Department concurring, arranged to have Provincial graders, testers and weighers placed in creameries located at what might be characterized as especially competitive points. The grading and testing of the cream received at the other creameries was handled by qualified graders employed by the operators.

Comparative figures are given in the following table for the grades of cream received at Alberta's creameries during the past two years. While the figures given for quantity in 1927 do not cover the total cream receipts, they do give an accurate picture of the percentage in each grade.

Seventy per cent. of the cream receipts for 1927 was handled at creameries where Provincial graders were stationed—the remaining 30 per cent. was handled at the other creameries and graded and tested by their own employees. In 1928 practically 50 per cent. of the cream was graded by Provincial graders and the remainder by licensed plant graders.

Grades, Butterfat.	1927	Per cent.	1928	Per cent.
	Pounds.	in Grade.	Pounds.	in Grade.
Table Cream	253,005	2.0	330,641	2.7
Special Grade	4,566,360	36.0	4,807,172	39.3
First Grade	6,476,849	51.0	6,197,896	50.6
Second Grade	1,372,994	10.8	885,875	7.2
Off Grade	26,849	.2	21,576	.2
Totals.....	12,696,057	100.0	12,243,160	100.0

The figures given in the foregoing table indicate a fair improvement in the quality of the cream received in 1928 over that of 1927, and the effect of this improvement is shown in a statement recently published covering the grading of butter by the Dairy Branch of the Dominion Department of Agriculture.

In my report for 1927 reference was made to the prevalence of weed or feed flavours in cream during the summer months. This defect was not nearly so marked during the season of 1928.

ANALYTICAL WORK.

The department's analytical work for yeasts and moulds in creamery butter was continued and extended during the year. This section of the work covered the routine analyses of yeasts and moulds and, in many cases, of the salt contents of 2,801 churnings

of butter from 99 creameries. Reports of these analyses are promptly forwarded to the operators of the creameries from whose butter the samples have been obtained.

In recording and reporting individual analyses of butter it is customary to place them into one of four classifications, according to the number of moulds and yeasts found, namely:

Excellent	0 to 10
Good	11 to 50
Fair	51 to 100
Poor, with a total count of over 100.	

The classification "Excellent" is the objective towards which every ambitious buttermaker should strive, indicating as it does the result of a determined and sustained effort to manufacture a product of high sanitary quality, combined with good judgment in selecting and adapting means to that end.

The number and percentage of analyses found from year to year in each of the classifications named may therefore serve as a good rule by which to measure the progress that has been made during the past few years. The following table shows this point in an interesting manner.

CLASSIFICATION OF ALL ANALYSES.								
	1925		1926		1927		1928	
	Number	%	Number	%	Number	%	Number	%
Excellent	25	3.6	39	3.2	444	16.5	810	28.9
Good	87	12.7	106	8.7	494	18.5	497	17.7
Fair	83	12.1	109	9.0	283	10.5	286	10.2
Poor	491	71.6	959	79.1	1,464	54.5	1,208	43.2
Total	686	100.0	1,213	100.0	2,685	100.0	2,801	100.0

The foregoing figures do not tell the whole story, however, since they simply give the combined figures for all the creameries. A detailed study of the analytical results reveals the fact that out of 99 creameries reported, 36 only failed to reach the classification "Excellent" with at least one of the churnings analysed. Of these 36 creameries, 10 had one or more churnings classified as "Good"; 13 others had one or more churnings classified as "Fair", leaving but 13 from which all the analyses had to be classified as "Poor".

The finest average mould and yeast count for butter from an Alberta creamery was recorded in 1928, when the average count of 60 churnings, taken at random throughout the year was .5 moulds and yeasts per gram. The men doing this excellent work attribute their success to the fact that from the beginning of the season they adopted a system that would give results and they made that system a part of their daily work. The figures in the foregoing table seem to indicate that the first of these essentials may be found in a number of creameries, but that the second aspect of the rule is not yet applied as generally and as closely as it should be.

It will be seen that progress is being made. The creamery operators and buttermakers appreciate the information which they receive periodically in the form of a laboratory report. At this point I quote the circular which was sent out on May 10 last to each of the creamery operators in Alberta, setting out the details of the analytical service for the ensuing season. The circular gives

details which will likely interest readers of this report, as to the methods followed in obtaining samples, etc.

Office of the Dairy Commissioner,
Edmonton, May 10, 1928.

Dear Sir:

Re Yeast and Mould Analyses of Butter.

1. By direction of the Minister of Agriculture, the Department offers to make yeast and mould counts of creamery butter during the next few months, free of charge, as follows:

- (a) An average of three analyses per month for any creamery that had a butter output of less than 150,000 pounds in 1927.
- (b) An average of four analyses per month for any creamery that had a butter output of 150,000 to 300,000 pounds in 1927.
- (c) An average of five analyses per month for any creamery that had a butter output of 300,000 pounds or more in 1927.

Samples for analysis under this arrangement will be taken at random by a representative of the Dairy Branch of the Department, from finished packages of butter, and at creamery and cold storage plants in Calgary and Edmonton where butter is regularly manufactured, stored or graded. It is expected that the creamery operators who wish to avail themselves of this service will facilitate as far as may be the obtaining of the samples. When, in the case of an individual creamery, early reports of high yeast and mould counts do not seem to call forth a material improvement, as indicated by a marked reduction in the counts of subsequent samples, the Department may withdraw the analytical work upon the grounds that the service is intended to be applied where it will do the most good.

2. An additional number of monthly analyses and reports may be made, upon the written requisition of the operator of a creamery, and at a nominal charge of not more than 50 cents each. The proceeds from this charge are intended to cover the cost of supplies and extra help required in connection with the analytical work during the season.

Kindly fill in and return the enclosed requisition form at your early convenience, so that all arrangements may be completed for the handling of the work.

Faithfully yours,

C. MARKER,

Dairy Commissioner.

It may be added here that some of the large-scale operators appreciated the service to the extent of asking for a stated number of monthly analyses and reports, for which they paid the charge set out in the circular.

BACTERIOLOGICAL SURVEYS.

The bacteriologist, Mr. J. B. Linneboe, has conducted and reported several creamery surveys made for the purpose of locating causes of high yeast and mould counts in butter. These surveys serve a very useful purpose and have invariably resulted in a better

product being made. A close check-up of each step in the manufacturing process in which the product is exposed to even slight contamination gives the operator a fuller understanding and appreciation of dairy factory sanitation. Similar surveys are also made for the instruction of the students attending the creamery short courses at the University. Every step in the procedure is followed closely by all the students, from the sampling of the raw cream and the product, through the various stages of pasteurization, churning, working and packing, and up to the laboratory technique of plating and counting.

DAIRY STATISTICS, ALBERTA.

(1) MILCH COWS

Year.	Cows.	Year.	Cows.
1901	46,101	1919	336,596
1906	101,245	1920	305,607
1911	147,649	1921	391,190
1912	157,922	1922	392,087
1913	168,376	1923	411,446
1914	179,068	1924	434,237
1915	183,974	1925	460,722
1916	284,895	1926	436,505
1917	325,861	1927	379,992
1918	328,702	1928	344,495

(2) TOTAL ANNUAL VALUE OF DAIRY PRODUCTS.

1900	\$ 546,476	1921	\$25,500,000
1910	7,855,761	1922	22,950,000
1915	15,895,586	1923	22,975,000
1916	18,466,311	1924	23,208,562
1917	24,794,597	1925	23,002,000
1918	27,500,000	1926	21,820,000
1919	31,625,000	1927	20,750,000
1920	34,000,000	1928	20,350,000

(3) CREAMERY BUTTER PRODUCTION.

Year.	Creameries.	Lbs. of Butter	Selling Value. (cents per lb.)	
1912	53	3,010,755	\$ 823,500	(27.352)
1913	49	4,115,537	1,090,475	(26.496)
1914	46	5,444,806	1,417,000	(26.025)
1915	57	7,544,148	2,021,448	(26.795)
1916	57	8,521,784	2,619,248	(30.736)
1917	66	8,944,171	3,414,541	(38.176)
1918	56	9,053,237	4,025,851	(44.469)
1919	53	11,822,890	6,132,739	(51.87)
1920	53	11,821,291	6,555,509	(55.45)
1921	44	13,048,493	4,543,007	(34.82)
1922	54	15,417,070	5,126,843	(33.25)
1923	75	17,868,853	5,891,186	(32.97)
1924	89	22,339,857	7,059,630	(31.6)
1925	99	19,630,101	6,959,059	(35.45)
1926	99	19,912,466	6,568,280	(32.96)
1927	100	16,179,712	5,765,347	(35.63)
1928	100	14,375,636	5,374,456	(37.38)

(4) FACTORY CHEESE PRODUCTION.

Year.	Factories.	Lbs. of Cheese.	Selling Value. (cents per lb.)	
1912	6	40,000	\$ 5,600	(14.00)
1913	7	70,716	5,900	(14.00)
1914	5	70,581	10,590	(15.00)
1915	13	381,832	68,441	(17.93)
1916	15	745,122	154,453	(20.73)
1917	20	1,274,905	280,185	(21.97)
1918	11	552,834	130,911	(23.68)
1919	10	520,530	145,161	(27.9)
1920	7	398,750	110,355	(27.7)
1921	10	930,660	200,478	(21.54)
1922	14	931,992	183,860	(19.73)
1923	13	1,865,608	368,771	(19.77)
1924	12	1,714,790	278,478	(16.24)
1925	14	1,473,835	306,604	(20.8)
1926	15	1,449,983	275,107	(19.0)
1927	12	848,511	170,690	(20.12)
1928	9	722,048	158,404	(21.94)

THE EIGHTH WORLD'S DAIRY CONGRESS.

It was my privilege to attend the eighth World's Dairy Congress in Great Britain in June, as official delegate for Alberta, and also to spend ten days in Denmark following the congress.

I submit in the following a brief description of the nature and purpose of the Dairy Congress as an international institution, set up to promote the development of dairying. Incidentally, I shall indicate some aspects of the dairy industry in Great Britain and Denmark.

The World's Dairy Congress has been a recognized, important institution in the dairy world for the past 25 years. It is held at intervals of two or more years, in association with the International Dairy Federation and, by special invitation, in leading dairy countries. The first congress was held in the year 1903 in Brussels, the headquarters of the Federation. The International Dairy Federation has a membership of some eighteen different nationals. Its purpose is to effect an international exchange of the latest knowledge of the science and practice of dairying and of the value of the use of milk and its products in the human dietary. To that end it brings together those who are directing the trend of the dairy industry to study economic causes which affect domestic and international commerce in dairy animals, products and equipment; to discuss methods of disease prevention and of regulating and controlling the sanitation and standardization of dairy products.

The eighth congress was held this year in Great Britain, at the special invitation of the Imperial Government and the British Dairy Organizations and under the distinguished patronage of His Majesty the King. The Minister of Agriculture and Fisheries and the Minister of Health were Honorary Joint Presidents and Lord Desborough Chairman. The congress sessions were held at Central Hall, London, June 26-30; at the University, Reading, July 2 and 3; in Scotland, July 4-8, and at the Royal Agricultural Show, Nottingham, July 10-12.

According to "The Times," there was a registration of nearly 2,000 persons, including delegates representing 42 different countries. The Right Honorable Walter Guinness, Minister of Agriculture and Fisheries, welcomed the delegates at the opening session, on behalf of the Government.

The business of the congress was organized under sections in order to facilitate the reading and subsequent discussion of the numerous papers presented on more or less related topics, and to give delegates the opportunity of attending the section and discussion in which they were specially interested. Each section had its own place of meeting.

Conference section 1 dealt with the general subject of milk production, including under that term such matters as feeding and management of dairy herds, milk recording association work, education and advisory work, relations between milk producer and dealer, and the marketing of milk upon the basis of quality. Twenty-two papers were presented.

Conference section 2 dealt with milk distribution and manufacture. Twenty-five papers were presented in this section upon such subjects as pasteurization; the effect of metals on milk; legislation as to composition and standards; the manufacture of ice cream, dried milk and casein; the retail distribution of milk; grading of butter for market, and the Canadian cheese on the world's market.

Conference section 3 dealt with milk consumption, administration and control. Six papers were presented on the nutritional and hygienic value of milk, and six papers dealing with propaganda for the increased use of milk in the human dietary.

Special sections A and B dealt with animal physiology and veterinary medicine in reference to milk production. Twelve papers, and discussion, in the former covered such subjects as "Factors Affecting Milk Yield" and "Specific Effect of Feeding Stuffs on the Milk Yield of the Cow", and in the latter, the questions of "The Veterinarian in Relation to the Milk Supply", and "The Inspection of Dairy Cows and the Need for a State Veterinary Health Service in Connection Therewith", were treated in six interesting papers and keenly discussed.

The special sections C and D met at the University of Reading and dealt with dairy bacteriology and dairy chemistry technique. In these sections fourteen papers were presented by outstanding investigators of ten different countries.

It is to be expected that considerable prominence is given to the statistical position, the organization and the major problems and achievements of the dairy industry of the country in which the World's Dairy Congress is being held. As one example of this, it is very evident that the congress held in the United States in 1923 gave a strong impulse to the organization and increased activity of National Milk Publicity Councils in several of the dairy countries of Europe, with the object of emphasizing the high food and health value of milk and milk products and of conducting and supporting educational publicity campaigns to that end.

In the case of the congress held in Great Britain, considerable prominence was given to the activities of dairy research workers, educational institutions and administrative bodies in promoting, (1) quality improvement by such very practical means as the clean milk demonstrations and competitions and the marketing of milk upon a graded basis; (2) economical production, emphasizing the value of organized milk recording societies (cow testing associations) and the study and use of suitable feeds for dairy stock, and (3) the increased appreciation and use of milk and milk products.

CLEAN MILK COMPETITIONS.

According to Dr. R. Stenhouse Williams, of the National Institute for Research in Dairying, Reading, the clean milk competitions were started in the year 1920 in one county. In 1926-27 such competitions were held in 36 different counties, with 1,062 competitors, and involved the milk of 28,520 cows. The competitions are usually held in connection with agricultural shows, and are said to attract good attention. I had an opportunity of watching a "clean milk demonstration" at the Royal Agricultural Show

at Nottingham. It was conducted by members of the staff of the Institute at Reading and involved every step in the process of the milking and the subsequent handling of the milk, the care of the cows and the utensils used. Each detail and its significance was carefully explained by the demonstrator, and also shown by printed posters and charts. The clean milk production campaign and the propaganda connected therewith in the form of departmental activities, widespread publicity, etc., will undoubtedly prove progressively effective in shaping public opinion with regard to the production and use of sound, high grade dairy products, and, indirectly, exercise a powerful influence upon the attitude and dispositions of the countries which look to Great Britain as the chief market for their surplus dairy products. I was greatly impressed with the possibilities in that direction as a result of the congress.

MILK RECORDING SOCIETIES.

I have referred to the work of milk recording societies. According to data presented at the congress, this work started officially in England in 1914, with 16 societies, 264 members and 7,330 cows. Last year (1927) this number had been increased to 49 societies, 5,174 members and 155,000 cows. A steady increase in the milk yield per cow was reported, and the statement was made that now the average milk production per cow is 900 pounds greater than that of 14 years ago. Further, it was stated that the average annual milk yield per cow for England and Wales is about 7,100 pounds. I assume that these figures apply only to the cows that were being regularly tested and recorded. The Scottish Milk Recording Associations had, in 1925, forty societies, 711 herds with 28,250 cows tested. According to statements made by a representative from Northern Ireland, five per cent. of the dairy cows there are being regularly tested and recorded through the milk recording associations. A similar proportion of the dairy cows of the Irish Free State are being regularly tested and recorded for milk production. Most, if not all, of the dairy countries of central and northern Europe have similar organizations. The representative from Hungary reported that 2.5 per cent. of the dairy cows of that country were being regularly tested and that the average milk production of 7,502 cows was 6,420 pounds, testing 3.8 per cent. of butterfat. In Denmark I found that nearly one-half million cows (every third cow in the country) are regularly tested and a record kept of the quantity and quality of the milk, as well as the amount, kind and relative cost of feed consumed.

THE MILK PUBLICITY COUNCIL.

A campaign of widespread publicity through the medium of the public press, posters, shop window displays, etc., is carried on by the Empire Marketing Board and the National Milk Publicity Council, calling attention in various ways to the food and health value of dairy products. This campaign appears to be enthusiastically supported by both national and local boards of health and educational institutions. Interesting particulars as to the organization and activities of milk publicity councils in Great Britain and

other countries are given in the printed report of the Proceedings of the Congress.

CO-OPERATIVE MARKETING OF MILK.

This subject was also given a prominent place in the agenda of the congress. A comprehensive paper on "The Dairymen's League and its Milk Pool in the U.S.A." was contributed by Judge John D. Miller, its Vice-President and General Counsel, and Mr. A. E. Magee, Secretary of the Scottish Milk Agency, Limited, presented a paper at the Edinburgh meeting, describing the organization of this body, started in November, 1927. Mr. Magee reported that the agency had a membership of 1,300 individual producers and sixteen of the farmers' co-operative creameries; that they controlled approximately 70 to 75 per cent. of the milk supply of Glasgow and the Clyde Valley and handled about 2,000,000 gallons of milk each month. It was further stated that the agency had succeeded in stabilizing the market price of fluid milk, and in effectively controlling the surplus which had formerly caused so much difficulty.

An interesting statement was made by Mr. Archibald MacNeilage, Jr., at the congress session at Edinburgh in connection with the discussion of the co-operative marketing of milk. He said that as a result of certain investigations which he had conducted for the Empire Marketing Board in connection with the marketing of milk, he had found that 71 per cent. of the available milk supply produced in Scotland was disposed of as market milk and the remaining 29 per cent. as milk for manufacture. In the case of England, 54 per cent. was disposed of as market milk and 46 per cent. manufactured. The comparative figures for the U.S.A. were 50-50; for Canada 32 to 68, and Australia 16 to 84 per cent.

I have referred briefly to a few of the many important subjects discussed at the various sessions of the congress, mainly to show the trend of the development that is taking place in the dairy industry in the Old Country, a development which will have a far-reaching influence upon the international trade in dairy products.

While the reading and discussion of papers in formal session claimed the major portion of the time and attention of the delegates to the congress, a number of tours were arranged to dairies and farms in and around the cities where the sessions were held. The delegates were thus given the opportunity to see some excellent dairy herds and to note the methods that were adopted in the production, processing and distribution of high grade milk. In the course of these tours the participating delegates enjoyed the splendid hospitality of the institutions visited. I was greatly impressed by the numerous dairy research projects under way and the excellent work that is being done at the National Research Institute at Reading and at the West of Scotland Agricultural College Dairy School, Kilmarnock—two institutions which I had the privilege of visiting.

The proceedings and surroundings of the Dairy Congress, held in the very centre of the world's market, gave the observer a fairly accurate perspective of the world's dairy industry in so far as the

exportable surplus product is concerned. The matter which interested me greatly, coming from western Canada, was the character of the imported creamery butter then on the market, since it represented in a sense the surplus production of the exporting countries and their relative standing in the market. Through the good offices of the Canadian Agricultural Representative in London, Mr. W. A. Wilson, and the kindly courtesy of prominent wholesale produce and provision merchants in London, Aylesbury, Manchester and Liverpool, I was given the opportunity, in company with a few fellow-delegates, of making a fairly close examination of the types and quality of the butter manufactured and exported at that time by creameries operating in twelve different countries.

In most cases we found a striking uniformity in type as to color, texture and rate of salting of the butter from the different countries. The principal difference lay in the flavour, and this factor determines very largely the commercial grade and relative price and standing of the products in the market.

The general uniformity in the type and workmanship of the butters which we examined showed very clearly that there was at the other end of the line an organized industry with conscious, well-directed team work in the production, manufacture and systems of standardization, supported by a more or less comprehensive structure of legislation, departmental activities in field and laboratory, expert training of workers, etc.

VISIT TO DENMARK.

Following the close of the congress, I left for Denmark on July 12, accompanied by Mr. L. A. Gibson, Dairy Commissioner for Manitoba, and Mr. Geo. H. Barr, Director of Dairying for Ontario. As several of the delegates from Denmark returned by the same boat, we had the benefit of their advice and a fine opportunity to plan our program for the visit to Denmark. We reached Esbjerg on July 13, and having learned that there was a Provincial Live Stock Show and Agricultural Exhibition in progress at Skanderborg, Jutland, we decided to spend a day there. Prof. L. Frederiksen, head of the Animal Husbandry Department of the Royal Agricultural College and a delegate to the Dairy Congress, very kindly offered to accompany us. We drove the distance, about 70 miles, by motor and had the opportunity of visiting the School of Agriculture and Dairying at Ladelund, founded some 50 years ago, and also one of the oldest and largest co-operative creameries in Denmark, located at Brorup.

Upon our arrival at Skanderborg we went to view the live stock exhibited. The cattle classes included the Red Danish, the black and white Jutland and the Shorthorn breeds. The judging had been completed and a printed list of placings was obtained, together with a printed catalogue of the individual exhibits. We were rather surprised to find that within the individual classes several animals had been awarded equal placing. For example: in one class, "bulls 2 to 3 years of age," there were 19 entries, and 3 firsts, 5 second, 6 third and 2 fourth prizes had been awarded. The principle is that any animal that is good enough to reach the standard required

for a first prize is given that placing. The printed catalogue of the entries in the male cattle classes gives herd book references as well as figures for milk and butterfat production of the dam and both grand-dams of each exhibit. No animal is accepted for entry unless this information be furnished by the owner, and from official sources. There were some very fine swine classes in both the native breed (Landrace) and the large White Yorkshire. I understand that the native breed has been greatly improved as a result of the breeding centre policy adopted a good many years ago, with this object in view.

There was another interesting feature of the exhibition, namely, the expert criticism of the exhibits by breeds, when attention was directed to outstanding qualities or defects in individual classes or exhibits. These talks by experts were given through amplifiers, at stated hours of the day, for the benefit of the exhibitors and others interested. Talks or lectures were also given on other subjects at stated hours, and we found that a great many of the visitors to the show followed the remarks with evident interest.

Separate tents had been erected for the housing of animal husbandry and field crops exhibits and domestic science demonstrations. Lectures and explanations were given by experts in each of these at stated hours, announced in the general exhibition catalogue. Furthermore, short talks and milking demonstrations were given by a prominent veterinarian who has, for many years, done great work in promoting sanitary methods and thoroughness in the milking of the dairy cow. Hundreds of farmers listened attentively to his talks and watched the demonstrations with commendable interest.

These are a few of the educational features about the show that we noticed more particularly.

On July 16 we visited, by appointment, the Research Laboratory at the Royal Agricultural College, Copenhagen, to examine some of the creamery butter that had been sent into the laboratory for examination under the National Export Brand regulations. This butter had been "called in" two weeks previously from some 120 creameries, so we had here an exceptional opportunity to note the uniform quality of the product shipped in from different parts of the country. During the afternoon we accompanied Prof. Lars Frederiksen to Hillerød, where the Danish Government own two large farms that are being used as experimental stations. Extensive feeding experiments with dairy cows are in progress here, under the direction of Prof. Frederiksen. We also visited the State Experimental Creamery, where most of the dairy products research work is being done. On our return trip we visited "Kollekolle," the well-known breeding centre for Red Danish dairy cattle.

On July 17 we visited two of the older milk distributing plants, one having been in operation for 50 years, and was, I understand, the first attempt made in Europe to provide a large urban community with high grade milk. The following day we called at the offices of the Danish Council of Agriculture. Mr. Hogsbro Holm, the secretary, received us very kindly, and gave us some interesting data respecting agricultural conditions in Denmark.

Our next move was to Odense, the principal city on the Island of Funen. We arrived there early in the afternoon of the 19th, and attended the Provincial Live Stock and Agricultural Show, which was then being held. The show was not quite so large as the one we visited at Skanderborg, though very similar in its main features.

The following day, July 20, we visited the School of Agriculture and Dairying at Dalum. Aside from this institution being one of the best equipped and most efficiently staffed schools of the kind in Denmark, there was one feature of special interest, namely, the agricultural museum. Here we saw in a separate substantial building a neatly arranged exhibit of both old and new agricultural implements, showing the gradual evolution of both methods and machines for the handling of the work and the products of the farm. A similar museum is being housed at the School of Agriculture at Ladelund, and another at Lyngby, near Copenhagen. There is much there to challenge the interest of the student of agriculture, and great credit is due to those who first thought of gathering together, arranging and caring for this most interesting material. We saw, for example, a specimen of the earliest machines that had been devised in Denmark for the testing of milk on a commercial scale. We also saw some of the types of cream separator construction of 50 years ago. They certainly present a marked contrast to the very efficient equipment that is in use today.

On Saturday, July 21, we proceeded to the city of Aarhus, to meet Mr. L. P. Frederiksen, the Secretary of the National Danish Dairy Federation. He is also in charge of the Bureau of Dairy Statistics, and was one of the Danish delegates to the World's Dairy Congress. We spent a very profitable couple of hours with Mr. Frederiksen. On the same day I had the pleasure of meeting my old principal of forty years ago, Mr. J. F. Mortensen, who had recently retired from the position that he had occupied for that space of time, as manager of "Kirkedal," one of the finest co-operative creameries in Denmark.

In closing this section of my report I submit, in a few paragraphs, some of the statistical data that were placed at my disposal, with regard to Denmark's production and export of dairy products.

Denmark's herd of dairy cows consisted last year of slightly more than 1,500,000 head, for which an average annual milk production of 7,000 pounds is reported. This herd is made up of about 50 per cent. of the Red Danish breed, 25 per cent. of the black and white Jutland breed, and the balance of Shorthorn and Shorthorn grades, Jerseys and Holsteins.

There has been a steady increase in the average milk production per cow for a number of years, due largely to the work done through the dairy herd improvement associations, in which the milk and butterfat production and feed consumption of individual cows is regularly recorded. Last year (1927) there were 1,211 such associations in operation, with 36,485 members and about 500,000 cows. Forty-four new associations were started during the year.

A Government grant is available for the encouragement and direction of the work of the herd improvement associations. The provisions of The Animal Industry Act, under which the grant

is available, require that the associations shall report each year to the respective provincial federation of agricultural societies as to the details of the milk production, the feed consumed and the progeny of the individual cows under test, and it is the duty of the federation to analyse and summarize these reports and to publish such of the findings as may be deemed to be of special interest in the promotion of the dairy industry.

The dairyman concerned appreciates the information which he may obtain with regard to his herd and individual cows, through a carefully kept record. He realizes that his marketing operations begin on his farm—that not only his entire herd, but the individual animal in it, becomes his primary market for the coarse feeds—straw, hay and root crops—which he can grow to advantage on his farm, as well as for the concentrates which he must buy from other countries.

The great bulk of the milk produced in Denmark is delivered to 1,632 creameries, where 97 per cent. of the milk receipts is made into butter. Thirteen hundred and seventy-three of these creameries are co-operative and handle milk from 90 per cent. of the farms and 87 per cent. of the cows. The remaining proportion is handled by the 259 privately operated creameries. Many of the creameries in Denmark manufacture cheese as well as butter. There are also 23 milk condenseries and 26 commercial ice cream plants. The latter marks a new feature in Danish dairymaking, in that the making of ice cream was put upon an industrial basis during the past couple of years.

Denmark's export of farm produce represents between 80 and 85 per cent. of her total exports, and practically one-half of that is made up of dairy products. The figures for 1927 show that nearly 315,000,000 pounds of butter were exported—about 71 per cent. to Great Britain and slightly less than 25 per cent. to Germany. There were other dairy products exported, however, as for instance, 11,650,000 pounds of cheese, principally to Germany, 55,250,000 pounds of condensed milk and cream, and 350,400 pounds of milk powder.

It has been stated in different quarters, as indeed I have heard it myself when re-visiting Denmark in July last, that for the past couple of years the farmers have been passing through a difficult economic period, largely due to the stabilization of the national currency—the inevitable consequence being relatively lower prices for their products without a compensating decrease in production costs.

The Danish Bureau of Agricultural Economics has reported some striking data upon this point, compiled from complete operating accounts of some 300 representative farms of varying acreage and situated in different parts of the country. The average figures per acre for all the farms included in this compilation show that for the year 1926-27 the investment in land, buildings, live stock, implements and supplies amounted to \$284.00 per acre; that the gross returns reached the sum of \$81.00, and the operating cost \$78.30, leaving a net return of \$2.70 per acre, or slightly under one per cent. on the capital investment. The year 1925-26 yielded .9

per cent., the year 1924-25 yielded 9.1 per cent., and the year 1923-24 yielded 8.1 per cent. on the investment.

Notwithstanding the exceedingly meagre net returns recorded for the past two years, the Danish farmer maintained a substantial increase in his production, believing that this period of economic stress will prove to be but temporary in character.

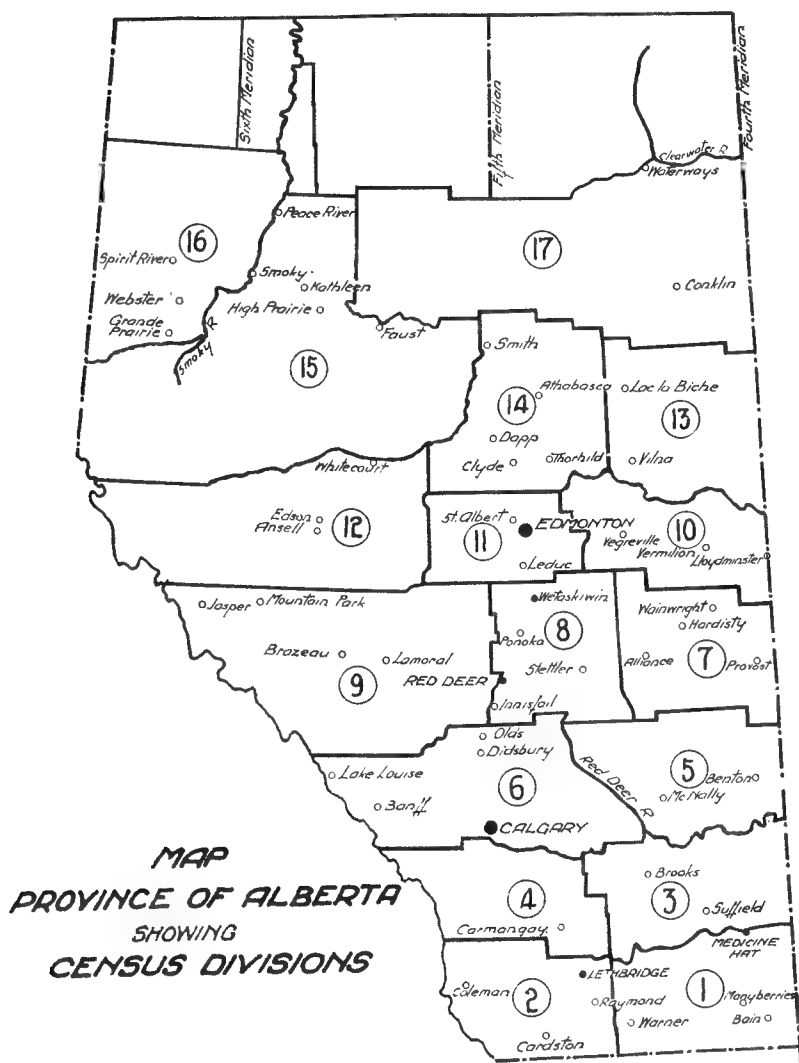
I left Denmark on July 23, with Mr. Barr, returning to London on the 24th. The following day I called on the Hon. H. Greenfield, Agent General of Alberta, and Mr. H. Faber, Agricultural Adviser to the Danish Legation, to express appreciation of courtesies received in connection with my visit to England and Denmark, and also to assist in arranging an itinerary for a party of Canadians who contemplated making a trip to Denmark. The time up to the 27th, the date of our departure for Canada, was fully taken up by visits to dairy produce merchants in Manchester and Liverpool, kindly arranged for us by Federal Departmental officers and already referred to in this report.

In expressing my appreciation of the opportunity that was given me to attend the eighth World's Dairy Congress and to revisit Denmark, I desire also to record here my acknowledgement of the many courtesies received then and since at the hands of Departmental officers and men engaged in various branches of the dairy produce trade, both in England and Denmark.

It was a great experience to be able to observe and, in so far as time and a crowded program permitted, to study at close quarters some of the many forward-looking activities in the World's Dairy Industry.

Some of these activities are fundamental and directly applicable here—indeed, well under way—for example, the general quality improvement program in relation to milk and cream distribution and manufacture.

Of other such activities, equally fundamental and applicable, I would refer particularly to the work of cow testing associations such as were first organized and put into operation in Denmark in 1895 and now operating more or less extensively in every dairy country. Reports from several countries tell the story of the value of this work as a practical aid in the developing and maintaining of high producing dairy herds and economical milk production. This line of work, while to a limited extent in operation here, deserves the interested attention of our dairymen.



COMPARATIVE STATEMENT OF AGRICULTURAL PRODUCTION, 1927-1928.
Publicity and Statistics Branch, Dept. of Agriculture, Edmonton, Alberta.
1928

Acreage	Yield per acre Bush.	Total Yield Bush.	Price	Value	FIELD CROPS	Acreage	Yield per acre Bush.	Total Yield Bush.	Price	Value
6,165,000	27.4	168,921,000	\$.98	\$165,542,580	Spring Wheat	6,597,264	23.2	152,762,000	\$.75	\$114,572,000
86,000	27.4	2,356,400	1.04	2,450,656	Winter Wheat	110,262	26.3	2,900,000	.84	2,435,000
6,251,000	27.4	171,277,400	.981	\$167,993,236	All Wheat	6,707,526	23.2	155,662,000	.75	117,008,000
2,248,000	45	101,150,000	.44	44,510,400	Oats	2,340,263	37.7	88,257,000	.38	33,538,000
400,000	30	12,000,000	.58	6,960,000	Barley	545,524	29.1	15,849,000	.47	7,449,000
156,500	20	3,130,000	.77	2,410,100	Rye	162,620	16.5	2,680,000	.77	2,075,000
12,500	16	201,600	1.61	324,576	Flax	6,182	9.9	61,000	1.50	92,000
15,400	32.9	614,000	1.53	325,520	Mixed Grains	14,084	29.0	409,000	.46	188,000
1,350	18.5	25,000	2.25	56,250	Peas	1,239	16.5	21,000	1.87	39,000
270	15.2	4,100	2.50	10,250	Beans	302	11.5	3,500	2.25	8,000
9,085,120		288,412,100		\$222,590,232	Total Field Crops	9,777,810		282,942,500		\$160,397,000
	Cwt.	Cwt.			ROOT CROPS		Cwt.	Cwt.		
31,100	104.1	3,287,510	\$1.00	\$ 3,237,510	Potatoes	28,366	78.3	2,221,058	\$1.03	\$ 2,287,690
5,850	95.4	558,000	1.13	630,540	Turnips, Mangolds, etc.	5,197	119.9	623,120	.76	473,571
5,000	6.8	34,000	7.00	238,000	Sugar Beets	5,200	7.22	37,600	7.75	291,400
41,950				\$ 4,106,050	Total Root Crops....	38,763				\$ 3,052,661
	Tons.	Tons.			FODDER CROPS		Tons.	Tons.		
1,500,000	2.50	3,750,000	\$10.00	\$ 37,500,000	Green Feed	1,555,985	2.25	3,500,966	\$10.00	\$ 35,009,660
287,000	2.09	599,830	10.41	6,244,230	Hay and Clover	390,447	1.64	492,733	10.31	5,080,077
42,000	3.09	130,000	12.29	1,597,700	Alfalfa	40,925	2.39	97,810	12.75	1,247,077
15,000	5.45	82,000	6.67	546,940	Fodder Corn	13,500	5.13	69,555	7.50	519,112
10,200	12.00	122,400	2.50	306,000	Sunflowers	10,125	10.00	101,260	2.00	202,520
1,854,200		4,684,230		\$222,590,232	Total Field Crops	9,777,810		4,262,024		\$ 42,058,746

DAIRY PRODUCTS

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MISCELLANEOUS PRODUCTS

Total Production, Lbs.	Price	Value	Total Production, Lbs.	Price	Value
100,000	\$.40	\$ 40,000	Alfalfa Seed		\$ 20,000
300,000	.20	60,000	Honey		67,200
2,600,000	.21	546,000	Wool		650,000
		8,500,000	Poultry Products		9,350,000
		2,356,000	Game and Furs		1,661,692
		25,000,000	Animals Slaughtered and Sold		27,600,000
		\$36,502,000	Total Miscellaneous Products		\$38,748,392

SUMMARY OF AGRICULTURAL PRODUCTION, 1927-28

1927	Acreage Under Cultivation.	1928	1927	Value of Production.	1928
Acres		Acres			
10,981,270	Field, Root and Fodder Crops....	11,737,556	\$272,891,152	Field, Root and Fodder Crops.....	\$205,508,407
2,845,873	Summerfallow	2,732,599	20,750,000	Dairy Products	20,350,000
750,000	Breaking this year	850,000	36,502,000	Miscellaneous Products	38,748,892
	Total Acreage under Cultivation ..	15,320,155	\$330,143,152	Total Value of Production	\$264,607,299
14,577,143					

NOTE.—The above statement is an estimate of the market value only of agricultural products. Not all of the crops mentioned are cash crops, as the value of much of the fodder crops is included again in livestock marketed. The statement presented is merely an effort to estimate the market value of products.

HON. GEORGE HOADLEY,
Minister of Agriculture.

D. A. McCANNEL,
Publicity Commissioner.

FIELD CROPS OF ALBERTA—1906 TO 1928 (INC.)
Showing acreage under cultivation, Yields, Value, etc.

Year.	SPRING WHEAT					FALL WHEAT						
	Acreage	Total Yield Bus.	Average		Price	Total Value	Acreage	Total Yield Bus.	Average		Price	Total Value
			Yield Bus.	Wt. Lbs.					Yield Bus.	Wt. Lbs.		
1906	115,502	2,664,661	23.07	.....	\$ .61	\$ 1,625,443	61,625	1,301,359	21.11	.....	\$ .71	\$ 923,965
1907	123,935	2,261,610	18.25	.....	.88	1,990,217	83,965	1,382,925	20.66	.....	.96	1,855,608
1908	212,677	4,001,504	18.81	58.39	.63	2,520,947	104,966	3,093,432	29.47	61.30	.73	2,258,198
1909	324,472	6,155,455	18.97	59.50	.72	4,431,928	102,167	2,812,344	22.63	61.70	.79	1,826,752
1910	450,493	5,697,956	12.85	59.64	.68	3,874,610	142,467	2,206,564	15.48	60.48	.72	1,588,726
1911	757,493	15,730,238	20.75	58.90	.58	9,123,588	182,671	4,336,749	23.74	59.46	.75	3,252,562
1912	957,874	17,434,774	18.20	58.01	.53	9,240,430	120,811	2,395,875	19.83	59.63	.59	1,413,566
1913	1,043,114	20,360,104	19.51	61.12	.61	12,419,663	83,719	1,250,129	14.93	60.96	.62	775,980
1914	989,561	15,102,033	15.26	60.75	.91	13,742,895	49,980	837,204	16.77	58.26	.94	786,972
1915	2,098,123	65,289,000	31.12	61.57	.88	57,454,320	39,908	1,249,000	31.30	61.32	.84	1,049,160
1916	1,549,475	41,163,471	26.57	58.00	1.33	54,747,418	18,683	1,447,475	23.90	61.19	1.39	1,621,990
1917	2,622,553	51,605,849	19.00	60.86	1.73	89,624,102	51,704	1,023,173	25.00	60.53	1.98	2,025,983
1918	3,018,371	23,090,544	7.65	59.94	1.92	44,333,845	44,065	660,976	15.00	60.00	1.92	1,959,072
1919	2,827,935	33,255,234	12.00	60.07	2.31	78,390,367	38,475	639,450	16.62	60.80	2.43	1,553,563
1920	4,085,003	82,712,738	20.50	61.32	1.52	125,723,362	37,990	712,777	18.76	61.00	1.52	1,088,421
1921	4,564,230	51,576,000	11.30	61.77	.77	39,714,000	85,114	1,468,000	17.25	60.33	.71	1,042,000
1922	5,701,041	64,991,867	11.40	60.58	.77	50,043,737	64,584	748,826	11.60	60.50	.74	564,131
1923	5,068,383	142,475,000	28.00	61.47	.85	92,608,750	84,269	2,359,000	28.00	60.00	.65	1,533,350
1924	5,849,552	61,045,072	11.00	59.73	1.20	73,254,087	24,281	266,871	11.00	60.66	1.20	320,345
1925	5,687,449	102,374,082	18.00	60.46	1.12	114,658,972	32,300	581,400	18.00	59.06	1.12	651,168
1926	6,057,000	112,047,000	18.50	59.46	1.05	117,649,350	58,000	1,073,000	18.50	59.44	1.05	1,126,650
1927	6,165,000	168,921,000	27.40	60.66	.98	165,542,580	86,000	2,356,400	27.40	61.39	1.04	2,450,656
1928	6,597,264	152,762,000	23.20	59.16	.75	114,572,000	110,262	2,900,000	23.20	60.68	.84	2,436,000

DEPARTMENT OF AGRICULTURE

FIELD CROPS OF ALBERTA, 1906 TO 1928 (Inc.)—Continued

Year.	WHEAT						OATS					
	Total of Spring and Fall Wheat						Acreage	Total Yield Bus.	Average		Price	Total Value
	Acreage	Total Yield Bus.	Yield Bus.	Wt. Lbs.	Price	Total Value						
1906	177,127	3,966,020	22.39	.....	\$.65	2,549,408	335,728	13,136,913	39.12	.....	\$.25	\$3,284,228
1907	207,900	4,194,585	20.17	.....	.92	3,845,825	307,093	9,247,914	30.11	.....	.34	3,144,290
1908	317,633	7,094,926	22.34	59	.67	4,779,145	431,145	15,922,974	36.93	39.37	.27	4,299,203
1909	426,639	8,467,799	19.85	59.86	.74	6,258,680	693,901	24,819,661	35.76	39.92	.24	5,956,719
1910	592,960	7,904,520	13.33	59.86	.69	5,463,336	492,539	12,158,530	24.68	38.05	.32	3,890,730
1911	940,164	20,066,987	21.35	59.02	.62	12,376,100	669,827	27,604,993	41.21	37.34	.28	7,729,398
1912	1,078,685	19,830,649	18.48	58.23	.54	10,653,996	971,969	37,085,234	38.15	38.94	.24	8,900,456
1913	1,126,833	21,610,233	19.17	61.10	.61	13,194,743	1,221,450	44,078,325	36.09	38.67	.24	10,578,798
1914	1,039,491	15,939,237	15.33	60.17	.91	14,529,868	1,147,382	34,597,117	30.15	38.01	.42	14,530,789
1915	2,138,031	66,538,000	31.12	61.52	.88	58,503,480	1,570,596	90,582,694	37.66	39.76	.31	28,080,635
1916	1,567,738	41,610,946	26.54	58.45	1.33	55,369,406	1,394,927	60,798,239	43.78	37.36	.46	27,967,189
1917	2,674,557	52,829,012	19.75	60.81	1.74	91,649,985	2,867,291	85,726,170	32.14	37.09	.63	54,007,487
1918	3,062,436	23,751,519	7.75	59.97	1.92	45,602,917	2,651,548	60,322,717	22.75	35.94	.73	44,035,583
1919	2,866,410	34,574,674	12.06	60.11	2.31	79,944,230	2,329,035	65,725,085	28.22	38.09	.64	42,064,054
1920	4,072,993	83,425,515	20.48	61.30	1.52	126,806,783	3,039,757	115,079,241	37.25	38.09	.36	41,428,526
1921	4,649,404	53,044,000	11.40	61.66	.77	40,756,000	1,614,500	64,132,000	30	37.38	.24	15,406,000
1922	5,765,595	65,740,693	11.40	60.58	.77	50,597,868	2,299,546	114,977,300	21.50	38.07	.45	15,620,287
1923	5,172,643	144,834,000	28	61.44	.65	94,142,100	2,959,546	34,711,750	50	38.08	.28	32,193,544
1924	5,573,813	61,311,943	11	59.75	1.20	73,574,332	1,847,632	55,428,969	30	38.70	.41	22,728,574
1925	5,719,749	102,955,482	18	60.33	1.12	115,310,140	2,397,200	74,318,200	31	36.10	.35	26,008,820
1926	6,115,000	113,130,000	18.50	59.46	1.05	118,776,000	1,907,000	57,210,000	30	34.12	.38	21,339,800
1927	6,251,000	171,277,400	27.40	60.67	.98	167,993,236	2,248,000	101,160,000	45	37.09	.44	44,510,400
1928	6,707,526	155,662,000	23.20	59.19	.75	117,008,000	2,340,233	88,257,000	37.7	35.04	.38	33,538,000

BARLEY		RYE	
1906	73,588	2,157,957	29.32
1907	54,898	1,082,460	19.78
1908	77,876	1,949,164	25.03
1909	107,764	3,310,332	30.72
1910	190,001	1,889,509	47.92
1911	103,802	3,037,584	29.41
1912	235,055	8,287,112	27.94
1913	338,462	9,645,812	25.32
1914	340,932	7,847,840	23.01
1915	374,062	12,761,187	34.11
1916	297,967	9,477,332	28.64
1917	462,726	9,984,789	22.56
1918	474,073	7,756,204	16.50
1919	414,212	10,562,406	25.50
1920	480,666	12,740,071	26.50
1921	523,891	11,657,000	22.25
1922	378,053	5,632,989	14.90
1923	383,853	14,778,533	38.50
1924	494,718	12,367,950	25.00
1925	552,177	13,818,175	25.00
1926	405,000	8,910,000	22.00
1927	400,000	12,000,000	30.00
1928	545,524	15,849,000	29.10
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FIELD CROPS OF ALBERTA, 1906 TO 1928 (Inc.)—Continued

Year.	BEANS					MIXED GRAINS						
	Acreage	Total Yield Bus.	Average		Price	Total Value	Acreage	Total Yield Bus.	Average		Price	Total Value
			Yield Bus.	Wt. Lbs.					Yield Bus.	Wt. Lbs.		
1910	.....	.....	.....	.....	.....	.....	1,798	36,556	20.33	.....	\$.47	\$ 17,000
1911	.....	.....	.....	.....	.....	.....	2,789	84,000	30	.....	.42	35,000
1912	.....	.....	.....	.....	.....	.....	2,800	97,000	34.50	.....	.40	39,000
1913	.....	.....	.....	.....	.....	.....	2,000	73,000	36.67	.....	.34	25,000
1914	.....	.....	.....	.....	.....	.....	1,800	72,000	40	.....	.47	34,000
1915	.....	.....	.....	.....	.....	.....	2,370	88,000	37.13	47.20	.52	45,700
1916	.....	.....	.....	.....	.....	.....	4,550	136,500	30	36	.35	47,800
1917	.....	.....	.....	.....	.....	.....	24,027	618,700	25.75	51.50	1.20	742,400
1918	763	14,000	18	60	\$ 6.45	90,000	27,989	602,000	21.50	40	1.15	692,000
1919	690	6,900	10	60	4.00	28,000	26,000	943,000	36.25	57	.83	783,000
1920	2,305	39,000	17	60	4.00	156,000	8,398	252,000	30.75	43	1.00	252,000
1921	339	6,400	19	60	2.00	12,800	13,013	278,780	21.50	43	.27	75,270
1922	100	1,425	14 1/4	60	2.00	2,850	14,314	214,710	15	44.50	.40	85,584
1923	559	6,149	11	60	2.00	12,298	11,228	468,769	41.75	44.25	.28	131,255
1924	461	5,532	12	60	2.00	11,064	13,445	403,350	30	44.25	.45	131,507
1925	332	3,984	12	60	2.25	8,964	15,026	375,650	25	40.80	.35	131,477
1926	410	6,000	15	60	2.25	13,500	15,700	471,000	30	41.17	.60	282,600
1927	270	4,100	15.2	60	2.50	10,250	15,400	614,000	39.9	47.10	.53	325,420
1928	302	3,500	11.5	60	2.25	8,000	14,094	409,000	29.0	44.20	.46	188,000

FIELD CROPS—AVERAGES
Bushels Per Acre

Crop	5 Years			10 Years			21 Years		
Spring Wheat	20.50	17.30	18.40	20.50	17.30	18.40	20.50	17.30	18.40
Fall Wheat	23.25	19.60	20.30	23.25	19.60	20.30	23.25	19.60	20.30
Wheat (Spring and Fall)	20.60	17.34	18.25	20.60	17.34	18.25	20.60	17.34	18.25
Oats	38.00	33.00	35.00	38.00	33.00	35.00	38.00	33.00	35.00
Barley	28.00	24.50	25.25	28.00	24.50	25.25	28.00	24.50	25.25
Rye	15.33	14.60	15.00	15.33	14.60	15.00	15.33	14.60	15.00
Flax	9.25	6.30	8.00	9.25	6.30	8.00	9.25	6.30	8.00
Peas	17.50	18.00	.....	17.50	18.00	.....	17.50	18.00	.....
Beans	12.60	13.00	.....	12.60	13.00	.....	12.60	13.00	.....
Mixed Grains	33.00	28.80	.....	33.00	28.80	.....	33.00	28.80	.....

ROOT CROPS PRODUCTION IN ALBERTA—1906 TO 1928 (INC.)
Showing acreage under cultivation, yields, and value.

Year.	POTATOES					TURNIPS, MANGOLDS, ETC.					SUGAR BEETS				
	Total Acreage	Total Yield Cwts.	Av. Yield Cwts.	Av. Price \$	Total Value \$	Total Acreage	Total Yield Cwts.	Av. Yield Cwts.	Av. Price \$	Total Value \$	Total Acreage	Total Yield Tons	Av. Yield Tons	Av. Price \$	Total Value \$
1906	18,267	1,579,295	119	.60	947,577	2,834	332,019	117	.45	149,408	3,344	27,211	8	\$5.00	136,055
1907	18,267	1,579,295	119	.60	947,577	2,834	332,019	117	.45	149,408	3,344	27,211	8	5.00	136,055
1908	18,200	1,180,200	89	.78	865,000	2,500	402,000	151	.50	201,000	5,200	41,600	8	5.00	208,000
1909	15,000	1,559,640	104	.65	1,014,000	2,400	492,000	205	.53	312,000	2,000	16,000	8	5.00	80,000
1910	20,086	1,403,941	70	1.06	1,498,000	1,333	141,707	106	.78	111,000	1,079	5,876	5.45	5.00	29,380
1911	23,863	2,763,600	116	.70	1,933,000	4,828	870,600	153	.48	421,000	1,795	14,000	8	5.00	70,000
1912	27,000	3,465,000	127	.65	2,252,000	5,000	768,600	153	.35	730,000	1,900	13,000	7	5.00	65,000
1913	26,300	2,610,000	103	1.08	1,697,000	5,000	740,400	148	.83	617,000	2,000	10,000	5	5.00	50,000
1914	26,300	2,191,200	83	1.08	2,374,000	4,900	751,200	153	1.30	751,000	100	600	6	5.00	3,000
1915	28,314	2,414,406	85	.73	1,793,800	1,688	238,200	141	.48	116,000	.....	.....	.....	.....	.....
1916	29,216	2,869,800	98	.88	2,535,000	1,700	285,000	167	1.01	289,800	.....	.....	.....	.....	.....
1917	48,917	4,445,400	91	1.26	5,631,000	10,947	1,363,200	124	1.23	1,881,000	.....	.....	.....	.....	.....
1918	44,247	1,871,640	42	1.85	3,462,500	12,506	1,414,440	113	1.10	1,555,900	.....	.....	.....	.....	.....
1919	45,848	4,944,720	108	1.38	6,840,200	12,500	1,661,280	133	1.76	2,934,900	.....	.....	.....	.....	.....
1920	43,000	4,282,800	100	1.66	7,138,000	12,300	1,381,700	157	1.66	3,219,500	.....	.....	.....	.....	.....
1921	51,377	4,885,800	95	.83	4,072,000	8,202	755,400	92	.50	378,000	.....	.....	.....	.....	.....
1922	42,502	2,792,381	66	.83	2,328,984	9,289	966,985	104	.50	483,492	.....	.....	.....	.....	.....
1923	39,960	4,755,240	119	.60	2,853,144	9,245	1,053,930	114	1.00	1,053,930	.....	.....	.....	.....	.....
1924	31,660	2,944,380	93	.95	2,797,161	6,602	660,200	100	1.25	825,250	.....	.....	.....	.....	.....
1925	32,359	3,235,900	100	1.00	3,235,900	8,555	1,226,000	143.3	1.11	1,606,000	5,400	41,400	7.65	5.75	238,050
1926	32,550	2,662,050	81	1.31	3,880,285	8,600	1,118,000	130	1.31	2,023,500	5,100	37,300	6.25	6.75	251,775
1927	31,100	3,237,550	104.1	1.00	2,937,510	5,850	358,000	95.4	1.23	630,550	5,000	34,000	6.80	7.00	238,000
1928	28,366	2,321,058	78.3	1.03	2,228,630	5,197	623,120	119.9	.76	473,571	6,200	31,600	7.22	7.75	231,400

FODDER CROPS PRODUCTION IN ALBERTA—1906 TO 1928 (INC.)

Showing acreage under cultivation, yields and value.

Year.	GREEN FEED					HAY AND CLOVER					ALFALFA				
	Total Acreage	Total Yield Tons	Av. Yield Tons	Av. Price	Total Value	Total Acreage	Total Yield Tons	Av. Yield Tons	Av. Price	Total Value	Total Acreage	Total Yield Tons	Av. Yield Tons	Av. Price	Total Value
1906	.....	.....	.....	.....	.....	49,307	86,315	1.80	\$7.00	\$ 604,205	.....	.....	.....	.....	.....
1907	.....	.....	.....	.....	.....	49,307	86,315	1.80	7.00	604,205	.....	.....	.....	.....	.....
1908	.....	.....	.....	.....	.....	57,100	111,000	1.95	7.60	846,000	.....	.....	.....	.....	.....
1909	.....	.....	.....	.....	.....	60,400	89,400	1.48	8.95	800,000	.....	.....	.....	.....	.....
1910	.....	.....	.....	.....	.....	149,973	125,662	0.84	14.58	1,882,000	.....	.....	.....	.....	.....
1911	.....	.....	.....	.....	.....	162,411	270,000	1.66	12.24	3,305,000	2,592	5,133	1.98	\$15.94	\$ 82,000
1912	.....	.....	.....	.....	.....	171,000	291,000	1.70	9.09	2,644,000	7,890	21,000	2.62	12.00	252,000
1913	.....	.....	.....	.....	.....	176,000	275,000	1.56	8.69	2,390,000	9,300	24,000	2.56	10.70	256,000
1914	.....	.....	.....	.....	.....	176,000	304,000	1.73	8.31	2,526,000	11,400	32,000	2.77	8.25	206,000
1915	.....	.....	.....	.....	.....	187,404	246,000	1.31	7.60	1,870,600	17,207	37,000	2.15	11.41	365,000
1916	.....	.....	.....	.....	.....	173,461	334,000	1.93	8.62	2,879,100	20,612	54,600	2.65	10.70	584,200
1917	.....	.....	.....	.....	.....	493,522	730,400	1.48	10.92	7,976,000	31,396	64,600	2.05	10.73	691,000
1918	.....	.....	.....	.....	.....	469,000	898,700	0.85	15.82	6,307,400	24,285	48,600	2.00	21.50	1,044,900
1919	.....	.....	.....	.....	.....	433,296	476,600	1.10	20.89	9,956,200	21,563	43,000	2.00	29.16	1,254,000
1920	.....	.....	.....	.....	.....	383,527	498,600	1.30	20.00	9,972,000	19,906	44,800	2.25	24.00	1,075,000
1921	755,651	1,133,476	1.50	\$10.00	\$11,334,760	454,883	454,883	1.00	10.00	4,548,830	30,000	52,500	1.75	12.00	630,000
1922	1,401,070	1,751,300	1.25	12.00	21,015,600	291,723	234,400	0.80	16.00	3,750,400	26,539	58,400	2.20	15.00	876,000
1923	1,861,033	4,187,324	2.25	3.00	12,561,972	245,178	404,543	1.65	6.00	2,437,258	38,548	104,079	1.70	10.00	1,040,790
1924	2,427,303	4,854,606	2.00	9.00	43,691,454	257,000	385,500	1.50	10.00	3,855,000	39,812	99,530	2.50	14.00	1,393,420
1925	1,432,382	4,297,146	3.00	9.00	38,674,314	288,471	387,706	1.50	12.00	4,652,472	48,995	146,985	3.00	15.00	2,204,775
1926	1,850,000	4,625,000	2.50	10.00	46,250,000	278,700	487,725	1.75	11.00	5,364,975	52,700	131,750	2.50	14.50	1,910,375
1927	1,500,000	3,750,000	2.50	10.00	37,500,000	287,000	599,830	2.09	10.41	6,244,230	42,000	130,000	3.09	12.29	1,597,700
1928	1,555,985	3,500,966	2.25	10.00	35,009,660	300,447	482,733	1.64	10.31	5,080,077	40,925	97,810	2.39	12.75	1,247,077

FODDER CORN			SUNFLOWER		
1906	1,259	2,392	1,89	\$ 7.53	18,000
1907	1,400	1,400	1,95	8.00	11,000
1908	1,500	1,500	2.00	8.50	10,000
1909	1,600	1,600	2.70	9.00	20,000
1910	1,700	1,700	2.00	3.50	5,600
1911	1,800	1,800	3.42	6.13	14,700
1912	1,900	1,900	2.56	9.00	15,300
1913	2,000	2,000	1.00	7.00	28,000
1914	2,100	2,100	5.50	10.50	39,900
1915	2,200	2,200	5.58	10.50	52,500
1916	2,300	2,300	4.25	18.00	585,000
1917	2,400	2,400	10.00	4.00	280,000
1918	2,500	2,500	5.25	5.00	411,000
1919	2,600	2,600	4.65	3.00	752,643
1920	2,700	2,700	3.88	5.00	1,349,440
1921	2,800	2,800	4.00	3.00	994,350
1922	2,900	2,900	4.50	3.00	16,137
1923	3,000	3,000	4.50	5.00	17,000
1924	3,100	3,100	4.50	5.00	170,000
1925	3,200	3,200	5.45	6.67	10,200
1926	3,300	3,300	5.13	7.50	546,940
1927	3,400	3,400			519,412
1928	3,500	3,500			10,126
					16,065
					160,650
					10.00
				\$ 3.00	\$ 481,950
					2.50
					400,342
					485,000
					306,000
					292,520
					2.00
					10.00
					101,260
					122,400
					12.00
					2.50
					10.00
					170,000
					160,137
					10.00
					3.00

PRODUCTION OF GRAIN CROPS BY CENSUS DIVISIONS, 1928
(Round Figures)

No. of Census Division	WHEAT			OATS			BARLEY			RYE		
	Acreage	Yield per Acre Bus.	Total Yield Bus.	Acreage	Yield per Acre Bus.	Total Yield Bus.	Acreage	Yield per Acre Bus.	Total Yield Bus.	Acreage	Yield per Acre Bus.	Total Yield Bus.
1	443,620	27	12,000,000	45,299	42	1,900,000	6,173	22¾	140,000	35,286	15¼	539,800
2	610,186	24½	15,000,000	95,411	36¾	3,500,000	21,040	26¾	550,000	11,088	17¼	190,000
3	284,304	24½	7,000,000	38,523	39	1,500,000	6,149	32½	200,000	13,167	15¾	300,000
4	685,755	24¾	17,000,000	180,657	39¾	7,200,000	39,183	25¾	1,000,000	8,865	16	110,000
5	766,624	20¾	16,000,000	163,988	31¾	5,200,000	15,686	25¾	400,000	32,285	16	315,000
6	790,849	26½	21,000,000	233,473	41¼	12,100,000	66,107	33¼	2,200,000	4,924	16¾	80,000
7	826,586	20½	17,000,000	218,150	36¾	8,000,000	29,415	23¾	700,000	25,597	19	482,000
8	586,490	22¼	13,000,000	333,671	39	13,000,000	110,184	33½	3,679,000	6,082	16¾	100,000
9	172,205	19¼	3,300,000	104,807	27¾	2,900,000	51,740	24	1,250,000	1,741	16	28,000
10	637,458	22	14,000,000	319,102	40	12,700,000	43,995	27¼	1,200,000	6,937	16	110,000
11	262,542	26¾	7,000,000	170,484	38	6,500,000	85,695	31½	2,700,000	1,247	20	25,000
12	32,512	20	650,000	29,395	32¼	950,000	4,815	23	110,000	272	18¾	5,000
13	153,802	19½	3,000,000	88,164	35¼	3,100,000	14,874	24¼	360,000	2,579	15	39,000
14	226,843	23	5,210,000	147,285	40¾	6,000,000	41,305	28	1,150,000	2,708	16¾	44,000
15	25,778	19½	500,000	33,932	28	950,000	2,238	20¼	45,000	600	20	12,000
16	201,306	19¾	4,000,000	77,710	35½	2,751,500	6,940	23¾	164,700	5,236	19	100,000
17	157	12¾	2,000	212	26	5,500	15	20	300	11	18	200

ACREAGE OF OTHER FIELD CROPS BY CENSUS DIVISIONS FOR THE YEAR 1928

No. of Census Division	OTHER FIELD CROPS					ROOT CROPS			FODDER CROPS				
	Flax Acres	Mixed Grains Acres	Peas Acres	Beans Acres	Potatoes Acres	Turnips, Mangolds, etc., Acres	Sugar Beets Acres	Green Feed Acres	Hay and Clover Acres	Alfalfa Acres	Fodder Corn Acres	Sunflowers Acres	
1	332	459	106	26	1,196	138	.....	36,687	7,150	1,577	829	2,314	
2	305	846	56	7	2,370	885	5,200	69,572	38,307	18,675	1,963	390	
3	69	63	226	.....	639	26	.....	35,578	3,465	5,685	611	273	
4	312	238	48	.....	1,441	171	.....	122,309	19,622	5,730	2,661	837	
5	3,978	195	49	42	1,641	202	.....	169,505	28,735	620	5,217	132	
6	.....	248	33	.....	2,361	122	.....	194,705	29,379	3,358	672	765	
7	616	901	86	17	2,019	245	.....	197,143	29,746	2,270	508	1,568	
8	159	791	27	.....	2,277	420	.....	179,453	35,772	770	296	732	
9	.....	1,131	121	7	1,016	257	.....	50,037	28,493	429	61	215	
10	111	3,479	234	25	3,479	512	.....	166,231	15,349	294	7	1,433	
11	53	857	75	30	4,030	682	.....	114,836	24,452	396	75	286	
12	.....	459	.....	.....	1,337	570	.....	20,834	9,530	445	237	176	
13	.....	1,355	140	63	1,869	376	.....	45,847	5,710	94	176	176	
14	230	2,236	77	68	2,352	499	.....	74,790	11,561	362	62	424	
15	.....	.....	.....	17	379	51	.....	10,263	2,117	.....	.....	.....	
16	17	836	21	.....	357	41	.....	68,105	10,529	220	125	575	
17	.....	.....	.....	.....	3	.....	.....	.....	80	.....	.....	1	
Total....	6,182	14,094	1,299	302	28,866	5,197	5,200	1,555,985	300,447	40,925	13,500	10,126	

AGRICULTURAL PRODUCTION IN ALBERTA—1906-1928

Year.	FIELD CROPS		ROOT CROPS		FODDER CROPS		Dairy Products Value	Miscellaneous Value	Total Value of all Production
	Yield Bushels	Value	Yield Tons	Value	Yield Tons	Value			
1906	19,321,843	\$ 6,590,960	122,776	\$ 1,233,040	86,315	\$ 604,205	\$ 2,000,000	\$ 6,000,000	\$ 16,428,205
1907	14,585,506	7,463,162	122,776	1,233,040	86,315	604,205	2,250,000	6,000,000	17,550,407
1908	25,063,451	9,790,015	120,710	1,274,000	111,000	846,000	4,500,000	8,000,000	24,410,015
1909	36,755,124	13,459,589	118,582	1,406,000	89,400	800,000	6,800,000	10,000,000	32,465,589
1910	22,067,947	10,198,240	83,158	1,638,380	133,187	1,932,000	7,855,761	12,000,000	33,624,381
1911	50,994,194	21,603,217	195,710	2,426,000	292,400	3,668,000	7,788,000	13,000,000	48,385,217
1912	64,559,530	23,607,608	224,630	3,047,000	316,200	2,910,000	9,120,000	14,000,000	51,384,608
1913	75,586,184	27,607,834	177,520	2,364,000	302,200	2,616,000	10,963,000	17,856,000	61,406,834
1914	58,938,102	33,499,329	147,720	3,125,000	337,600	2,996,600	12,843,000	23,466,321	73,563,160
1915	170,884,242	83,252,561	152,630	1,895,800	285,400	2,168,000	15,855,586	24,896,438	136,108,386
1916	90,243,590	43,558,985	157,740	2,824,800	390,300	3,478,600	15,466,511	40,560,000	166,573,301
1917	130,733,589	159,558,985	290,430	7,312,800	461,100	8,636,000	24,794,597	51,681,682	252,042,264
1918	93,787,915	100,658,854	164,304	5,015,400	524,600	7,332,200	27,500,000	57,875,000	198,444,454
1919	113,236,218	137,006,200	330,300	9,775,100	575,900	11,632,700	31,625,000	58,518,591	248,187,591
1920	215,730,706	182,243,629	310,725	10,357,500	1,710,759	11,679,590	34,000,000	45,980,901	284,213,930
1921	131,404,780	61,551,270	282,060	4,450,000	2,126,300	16,793,590	22,950,000	28,060,416	136,355,276
1922	110,770,329	71,643,368	187,968	2,810,476	4,946,827	26,053,000	22,975,000	25,031,315	148,488,159
1923	282,309,513	135,726,863	290,458	3,907,074	4,946,827	16,782,663	22,975,000	27,802,500	207,194,100
1924	132,356,363	106,699,147	180,229	3,622,411	5,770,174	50,771,264	23,208,562	32,122,254	216,423,638
1925	193,127,472	148,541,612	264,495	5,075,950	5,323,624	46,926,853	23,002,000	34,044,200	257,594,615
1926	181,157,900	145,613,870	241,302	6,155,640	5,639,475	55,075,350	21,830,000	35,267,550	268,931,910
1927	288,412,100	222,590,232	223,775	4,106,050	4,684,280	46,194,870	20,750,000	36,502,000	330,143,152
1928	262,942,500	160,397,000	179,809	3,052,661	4,262,024	42,058,746	20,330,000	38,748,892	264,607,299

ACREAGE UNDER CULTIVATION IN ALBERTA—1906-1928

Year.	Acreage under Crops				*Summer-fallow Acres	†New Breaking Acres
	Field Acres	Root Acres	Fodder Acres	Total Acres		
1906	591,229	19,445	49,307	659,981	.....	.....
1907	576,770	19,445	49,307	645,522	.....	.....
1908	887,166	20,900	57,100	915,166	.....	.....
1909	1,242,375	19,400	60,400	1,322,175	.....	.....
1910	1,195,328	22,498	153,824	1,371,650	.....	.....
1911	1,735,314	30,486	171,040	1,936,840	.....	.....
1912	2,394,238	33,900	180,900	2,609,038	.....	.....
1913	2,798,142	33,000	185,600	3,016,742	.....	.....
1914	2,586,414	31,300	188,200	2,805,914	.....	.....
1915	4,138,529	30,002	205,312	4,373,843	.....	.....
1916	3,319,327	30,916	194,748	3,544,991	.....	.....
1917	5,999,976	59,864	528,894	6,588,734	1,153,106	.....
1918	6,353,600	56,753	493,985	6,909,338	1,667,753	.....
1919	5,768,084	56,348	455,749	6,282,181	1,717,747	583,063
1920	7,921,666	55,300	411,077	8,388,043	1,833,700	485,852
1921	7,496,017	59,579	1,247,525	8,803,121	2,276,442	517,455
1922	8,218,838	51,791	1,734,980	10,005,609	2,460,492	494,495
1923	8,282,898	49,205	2,198,712	10,530,815	2,758,032	485,567
1924	8,221,100	38,262	2,807,652	11,067,014	2,308,278	396,329
1925	8,825,115	46,314	1,829,685	10,701,114	2,586,346	414,720
1926	8,567,810	46,250	2,248,400	10,862,460	2,718,926	559,531
1927	9,085,120	41,950	1,854,200	10,981,270	2,845,873	750,000
1928	9,777,810	38,763	1,920,983	11,737,556	2,732,599	850,000

*No records available before 1917.

†No records available before 1919.

DETAILS OF ACREAGE UNDER SUMMERFALLOW AND NEW BREAKING BY CENSUS DIVISIONS, ALBERTA, 1928

No. of Census Division	Summer-fallow Acres	New Breaking Acres	Total Acres
1	144,520	20,000	164,520
2	274,224	30,000	304,224
3	97,746	18,000	115,746
4	340,597	33,000	373,597
5	399,564	63,000	462,564
6	397,000	85,000	482,000
7	326,040	85,000	411,040
8	188,750	97,000	285,750
9	71,868	27,000	98,868
10	198,055	150,000	348,055
11	93,791	63,000	156,791
12	16,515	9,000	25,515
13	38,150	40,000	78,150
14	76,427	80,000	156,427
15	8,400	10,000	18,400
16	60,837	39,945	100,782
17	115	55	170
Total.....	2,732,599	850,000	3,582,599

DAIRY PRODUCTS, ALBERTA—1906 TO 1928 (INC.)

Year.	CREAMERY BUTTER					CHEESE				Total Value of All Dairy Products	
	No. of Milch Cows	No. of Creameries	Total Production Lbs.	Average Price c. per lb.	Total Value	No. of Factories	Total Production Lbs.	Average Price c. per lb.	Total Value	Total Value of Other Dairy Products	Total Value of All Dairy Products
1906	101,245	42	1,860,356	21.21	\$ 415,800	7	97,739	13.30	\$ 13,000	\$ 1,571,200	\$ 2,000,000
1907	101,245	45	1,487,324	23.52	350,000	8	197,911	13.50	27,000	1,878,900	2,250,000
1908	110,357	51	2,097,394	25.12	526,800	8	190,000	12.50	23,750	3,949,450	4,500,000
1909	116,371	54	2,476,975	24.22	600,000	11	224,000	12.50	28,000	6,172,000	6,800,000
1910	124,470	60	2,238,078	25.59	575,000	11	220,000	12.50	27,500	7,253,261	7,865,761
1911	147,637	56	2,543,368	24.37	635,000	8	100,000	14.00	14,000	7,139,000	7,788,000
1912	157,922	53	3,010,755	27.35	823,500	6	40,000	14.00	5,600	8,290,900	9,120,000
1913	168,376	49	4,115,537	26.50	1,090,475	7	70,715	15.00	10,590	9,866,525	10,963,000
1914	179,068	46	5,444,806	26.02	1,417,000	5	70,531	15.00	10,590	11,415,410	12,843,000
1915	183,974	57	7,544,148	26.79	2,021,448	13	381,832	17.93	68,441	13,805,697	15,895,586
1916	277,324	57	8,521,784	30.74	2,619,248	15	745,122	20.73	154,453	15,692,610	18,466,311
1917	325,861	66	9,944,171	38.18	3,414,541	20	1,274,905	21.97	280,185	21,099,871	24,794,597
1918	328,702	53	9,053,237	44.47	4,025,851	11	522,834	23.68	130,911	23,343,238	27,500,000
1919	336,596	53	11,822,890	51.57	6,132,739	10	520,530	27.90	145,161	25,347,100	31,625,000
1920	305,607	53	11,821,291	55.05	6,555,509	7	398,750	27.70	110,355	27,334,186	34,000,000
1921	423,838	44	13,048,438	34.32	4,533,007	10	930,600	21.54	200,478	20,756,515	25,500,000
1922	392,037	54	16,417,070	33.25	5,126,843	14	931,992	19.73	183,860	17,639,297	22,950,000
1923	410,242	75	17,868,853	32.37	5,891,186	13	1,265,608	13.77	368,771	16,715,743	22,975,000
1924	433,528	89	22,339,857	31.50	7,095,630	12	1,714,790	16.24	278,473	15,870,434	23,208,562
1925	460,722	99	19,630,101	35.43	6,959,059	14	1,473,835	20.80	306,604	15,736,337	23,002,000
1926	436,500	99	19,912,466	32.96	6,568,280	15	1,449,933	18.97	275,107	14,976,613	21,820,000
1927	380,000	100	16,179,712	35.63	5,765,347	12	848,511	20.12	170,690	14,813,963	20,750,000
1928	344,495	109	14,375,636	37.38	5,374,456	9	722,043	21.94	158,404	14,817,140	20,350,000

DAIRY FARM PRODUCTION, 1927

MILK, ETC.

(Dominion Bureau of Statistics)

	Production, Lbs.	Value
Made into Butter:		
Dairy	222,395,000	\$ 2,945,000
Butter Production	9,500,000	
Creamery	378,767,058	5,765,348
Butter Production	16,179,712	
Made into Cheese:		
Home-made	357,795	5,431
Cheese Production	31,946	
Factory	9,503,323	170,689
Cheese Production	848,511	
Miscellaneous Factory Products	4,090,711	345,237
Consumed fresh or otherwise used.....	146,519,425	3,413,903
Total.....		\$12,645,608

PRODUCTION AND VALUE OF DAIRY PRODUCTS BY CENSUS
DIVISIONS FOR THE YEAR 1928.

CREAMERIES

No. of Census Division	No. of Creameries	Lbs. of Butter	Selling Value	No. of Milch Cows
1	1	176,719	\$ 66,270	18,320
2	4	709,680	278,981	17,195
3	1	58,368	22,348	8,745
4	4	355,645	134,495	17,649
5	2	416,368	156,142	22,241
6	13	2,262,986	866,152	31,955
7	11	1,191,571	446,908	28,787
8	22	4,064,301	1,540,413	52,731
9	6	555,722	205,617	17,672
10	12	1,139,571	407,336	42,872
11	13	2,622,033	953,982	35,615
12	1	24,063	8,470	4,772
13	4	295,336	103,570	12,173
14	3	345,893	126,847	20,667
15	1	57,914	20,549	3,443
16	2	99,466	36,376	9,639
17 .....	....	.....	.....	19
Total Creameries	100	14,375,636	\$5,374,456	344,495

CHEESE FACTORIES

No. of Census Division	No. of Factories	Lbs. of Cheese	Selling Value	No. of Milch Cows
2	1	41,946	\$ 9,101	17,195
8	5	344,841	75,838	52,731
10	1	132,108	29,327	42,872
11	2	203,153	44,138	35,615
Total Cheese Factories.....	9	722,408	\$ 158,404	.....

MISCELLANEOUS PRODUCTS, ALBERTA—1913 TO 1928 (INC.)

Year.	ALFALFA SEED			HONEY			WOOL			POULTRY	GAME AND FURS		ANIMALS SLAUGHTERED AND SOLD
	Quantity Lbs.	Aver. Price cents per lb.	Total Value	Quantity Lbs.	Aver. Price cents per lb.	Total Value	No. of Sheep	Quantity Lbs.	Aver. Price cents per lb.	Total Value	Total Value	Total Value	
1913	.....	...	.....	.....	...	.....	178,015	1,300,000	12	\$ 156,000	\$ 2,125,000	\$ 575,000	\$15,000,000
1914	.....	...	.....	.....	...	.....	211,001	1,477,007	16	236,321	2,450,000	600,000	20,000,000
1915	.....	...	.....	.....	...	.....	238,579	1,570,053	25 1/4	396,438	3,000,000	1,000,000	20,500,000
1916	.....	...	.....	.....	...	.....	294,690	1,750,000	32	560,000	3,000,000	2,000,000	35,000,000
1917	.....	...	.....	.....	...	.....	276,966	2,086,633	57	1,181,682	3,500,000	2,000,000	45,000,000
1918	.....	...	.....	.....	...	.....	332,179	2,500,000	65	1,625,000	4,000,000	2,250,000	50,000,000
1919	.....	...	.....	.....	...	.....	364,498	2,114,319	60	1,268,591	5,000,000	2,250,000	50,000,000
1920	.....	...	.....	.....	...	.....	383,424	1,740,239	42	730,901	5,000,000	2,250,000	50,000,000
1921	.....	...	.....	.....	...	.....	523,599	2,177,123	13 3/4	300,000	8,470,000	2,000,000	38,000,000
1922	100,000	35	\$ 35,000	.....	...	.....	410,366	1,937,137	18 3/4	348,000	8,000,000	2,600,000	17,290,416
1923	100,000	30	30,000	.....	...	.....	335,243	1,387,247	23 1/2	326,500	8,300,000	2,000,000	18,148,315
1924	100,000	30	30,000	.....	...	.....	206,458	1,181,545	33	389,910	8,316,000	2,000,000	17,146,000
1925	300,000	30	90,000	115,000	25	\$ 13,750	236,804	1,540,000	28	431,260	8,000,000	2,500,000	20,772,594
1926	500,000	35	175,000	215,000	17	36,550	411,400	2,400,000	19	456,000	8,500,000	2,100,000	23,000,000
1927	100,000	40	40,000	300,000	20	60,000	510,000	2,600,000	21	546,000	8,500,000	2,356,000	24,000,000
1928	50,000	40	20,000	336,000	20	67,200	515,000	2,600,000	25	650,000	9,350,000	1,661,592	25,000,000
													27,000,000

HONEY PRODUCTION BY CENSUS DIVISIONS FOR THE YEAR 1928.

No. of Census Division	No. of Beekeepers	No. of Colonies	Lbs. per Colony	Production Lbs.
1	1	6	67	400
2	40	2,776	95	262,800
3	12	62	60	3,700
4	1	10	50	500
5	6	50	42	2,100
6	26	120	48	5,800
7	26	220	60	13,000
8	26	250	60	15,000
9	5	70	71	5,000
10	9	40	25	1,000
11	35	400	50	20,000
12	1	40	60	2,400
13	2	3	67	200
14	6	80	37	2,950
15	2	3	50	150
16	2	20	50	1,000
17 .....	....	....	....	....
Total..	200	4,150	892	336,000

LIVESTOCK INDUSTRY IN ALBERTA—1906 TO 1928 (INC.)

Year.	HORSES			MILCH COWS			OTHER CATTLE			TOTAL OF MILCH COWS AND OTHER CATTLE		
	No.	Price	Value	No.	Price	Value	No.	Price	Value	No.	Price	Value
1906	226,534	\$ 60.00	\$13,592,040	101,245	\$ 30.00	\$ 3,037,350	449,387	\$ 20.00	\$ 8,987,740	550,632	\$ 22.00	\$12,025,090
1907	226,534	60.00	13,592,040	101,245	30.00	3,037,350	449,387	20.00	8,987,740	550,632	22.00	12,025,090
1908	246,922	70.00	17,284,540	110,357	34.00	3,752,138	534,395	22.00	11,755,172	644,882	24.00	15,507,310
1909	263,713	90.00	23,734,170	116,371	35.00	4,072,985	510,547	23.00	11,742,581	626,918	25.00	15,815,566
1910	294,225	100.00	29,422,500	124,470	39.00	4,854,330	578,038	25.00	14,450,360	702,508	27.00	19,305,280
1911	407,153	100.00	40,715,300	177,687	40.00	5,307,480	592,163	30.00	17,764,890	739,850	32.00	23,672,370
1912	451,573	100.00	45,157,300	187,922	50.00	7,896,100	587,307	30.00	17,619,210	745,229	34.00	25,515,310
1913	484,309	120.00	58,117,080	188,376	43.00	7,240,168	610,917	27.00	16,494,759	779,293	30.00	23,734,927
1914	513,424	100.00	51,342,400	179,068	65.00	11,818,488	633,032	45.00	28,486,440	843,974	53.00	44,942,000
1915	544,172	100.00	54,417,200	183,974	77.00	12,602,000	660,000	49.00	32,340,000	812,100	49.50	40,304,923
1916	629,462	100.00	62,946,200	277,324	77.00	21,353,900	882,766	56.00	49,344,900	1,160,990	60.00	70,788,800
1917	718,317	60.00	43,099,020	325,861	89.00	29,083,000	1,209,433	64.25	77,706,000	1,535,294	69.50	106,789,000
1918	791,246	70.00	55,387,220	328,702	89.00	30,569,000	1,362,880	70.00	95,402,000	1,691,582	74.00	125,971,000
1919	800,380	60.00	48,022,800	336,596	89.00	29,957,000	1,247,448	60.00	74,847,000	1,584,044	66.00	104,804,000
1920	741,351	60.00	44,511,060	305,607	71.00	21,698,000	1,050,334	45.00	47,265,000	1,355,941	50.00	68,983,000
1921	916,510	40.00	36,660,400	423,838	48.00	20,344,000	1,430,364	28.00	40,050,192	1,854,202	32.00	60,394,192
1922	829,143	40.00	33,165,720	392,037	50.00	19,601,850	1,261,005	21.00	26,481,105	1,658,042	28.00	46,082,955
1923	863,316	40.00	34,532,640	410,242	50.00	20,512,100	1,110,682	23.00	25,545,686	1,520,924	30.00	45,057,786
1924	861,537	40.00	34,461,480	433,528	60.00	26,011,680	1,188,468	23.00	27,334,764	1,621,266	33.00	53,346,444
1925	849,939	60.00	50,996,340	460,722	59.00	23,036,100	1,066,007	30.00	31,980,210	1,826,723	36.00	66,016,310
1926	835,000	50.00	41,750,000	436,500	59.00	21,825,000	1,020,000	30.00	27,900,000	1,866,500	36.00	67,725,000
1927	762,600	45.00	34,317,000	330,000	55.00	20,900,000	1,155,000	33.00	36,115,000	1,835,000	38.40	59,015,000
1928	740,408	45.00	33,318,360	344,495	55.00	22,392,175	1,955,000	40.00	38,200,000	1,299,495	46.63	60,592,175

LIVESTOCK INDUSTRY IN ALBERTA—1906 TO 1928 (INC.)—Continued

Year.	SHEEP			SWINE			VALUE OF LIVESTOCK
	No.	Price	Value	No.	Price	Value	
1906	154,266	\$ 5.00	\$ 771,330	114,623	\$ 8.00	\$ 916,984	\$ 27,305,444
1907	154,266	5.00	771,330	114,623	8.00	916,984	27,305,444
1908	161,979	5.82	942,718	115,769	8.73	1,010,663	34,745,231
1909	171,422	6.80	1,165,670	139,270	10.20	1,420,554	42,135,960
1910	179,067	6.30	1,128,122	143,560	9.45	1,356,642	51,212,544
1911	183,592	5.68	1,042,803	237,510	9.50	2,256,345	67,402,818
1912	185,075	5.00	925,375	278,747	10.00	2,787,470	74,135,455
1913	178,015	5.67	1,009,345	350,692	8.40	2,945,813	85,867,165
1914	211,001	6.96	1,468,567	397,123	10.23	4,062,568	97,778,483
1915	238,579	7.50	1,789,000	229,696	12.50	2,871,000	104,079,200
1916	294,690	10.00	2,946,900	693,554	17.00	10,260,400	146,942,300
1917	276,966	14.50	4,015,000	730,237	24.25	17,708,000	171,812,020
1918	321,179	15.00	4,817,685	601,583	21.00	12,633,250	200,778,220
1919	384,498	14.00	5,383,000	445,588	23.00	10,338,000	168,076,800
1920	533,424	10.00	5,333,000	286,556	18.00	5,158,000	122,465,060
1921	523,539	6.00	3,141,600	574,318	13.00	7,466,000	107,662,192
1922	410,366	8.00	3,282,928	623,188	18.00	11,217,384	95,115,907
1923	335,243	8.00	2,681,944	706,681	16.00	11,306,900	93,212,350
1924	266,458	10.00	2,664,580	949,891	16.00	15,198,256	105,070,760
1925	236,804	10.00	2,368,040	914,750	16.00	14,636,000	123,016,690
1926	411,400	9.00	3,702,600	780,000	12.00	9,360,000	104,537,600
1927	510,000	9.50	4,845,000	742,600	11.00	8,168,600	106,345,600
1928	515,000	9.50	4,892,500	680,000	11.00	7,480,000	106,283,035

POULTRY INDUSTRY IN ALBERTA—1917 TO 1928 (INC.)

Year.	TURKEYS			GEESE			DUCKS			OTHER FOWL			TOTAL POULTRY		
	No.	Price	Value	No.	Price	Value	No.	Price	Value	No.	Price	Value	No.	Price	Value
1917	159,177	\$2.20	\$350,189	79,720	\$1.75	\$139,510	122,463	\$1.00	\$122,463	2,901,857	\$.56	\$1,625,040	3,263,217	\$.70	\$2,337,202
1918	129,838	2.50	324,595	73,733	2.00	147,466	116,942	1.10	128,636	2,701,820	.80	2,161,456	3,022,333	.91	2,762,153
1919	179,000	2.90	519,100	94,244	2.25	212,049	166,000	1.15	190,900	3,387,131	.88	3,503,675	4,426,375	1.00	4,430,724
1920	144,000	3.07	442,080	72,000	2.55	183,600	83,597	1.22	41,000	2,344,658	.92	2,157,000	2,594,255	1.09	2,823,680
1921	283,346	2.90	821,700	83,363	2.22	185,000	62,814	1.13	71,000	4,534,042	.70	3,173,800	4,963,555	.85	4,351,500
1922	337,336	2.46	829,800	89,724	1.92	172,300	86,536	.96	83,100	4,908,543	.59	2,896,000	5,422,139	.74	3,981,200
1923	580,510	1.68	975,300	93,638	1.61	150,800	98,455	.77	75,800	5,357,560	.51	2,987,400	6,630,163	.63	4,189,300
1924	598,863	1.91	1,134,000	112,733	1.55	175,000	119,110	.84	100,000	5,656,378	.58	3,281,000	6,482,084	.73	4,690,000
1925	545,888	1.90	1,036,237	138,683	1.05	145,617	109,174	.85	92,798	5,659,472	.50	2,779,736	6,352,717	.64	4,054,388
1926	555,000	2.75	1,526,250	124,000	1.05	130,200	130,000	.75	97,500	5,850,000	.55	3,217,500	6,653,000	.75	4,971,450
1927	451,000	2.80	1,262,800	104,000	1.75	182,000	79,000	1.05	82,950	5,219,000	.65	3,392,350	5,853,000	.84	4,820,100
1928	517,857	2.70	1,398,214	100,461	2.00	200,922	99,258	1.00	99,258	5,436,130	.80	4,396,904	6,213,706	.98	6,095,298

LIVESTOCK SHIPMENTS BY CENSUS DIVISIONS, ALBERTA, 1928

No. of Census Division	HORSES			CATTLE		
	Local	Export	Total	Local	Export	Total
1	437	2,113	2,550	6,345	14,176	20,521
2	1,095	3,207	4,302	7,811	9,849	17,660
3	698	1,210	1,908	5,812	4,000	9,812
4	1,047	1,070	2,117	7,924	9,372	17,296
5	484	1,290	1,774	5,744	1,457	7,201
6	2,504	7,647	10,151	23,267	57,545	80,812
7	887	966	1,853	13,626	5,460	19,086
8	1,654	773	2,427	28,170	5,087	33,257
9	199	59	258	4,856	829	5,685
10	682	824	1,506	11,581	6,961	18,542
11	626	412	1,038	5,765	32,729	38,494
12	391	34	425	701	3	704
13	182	17	199	5,283	178	5,461
14	168	4	172	5,972	.....	5,972
15 .....	.....	.....	.....	.....	.....	.....
16	36	24	60	4,773	66	4,839
17 .....	.....	.....	.....	.....	.....	.....
Total	11,090	19,650	3,740	137,630	147,712	285,342

LIVESTOCK AND POULTRY POPULATION BY CENSUS DIVISIONS, ALBERTA, 1928

No. of Census Division	POULTRY										
	Horses No.	Milch Cows No.	Other Cattle No.	Total Cattle No.	Sheep No.	Swine No.	Turkeys No.	Geese No.	Ducks No.	Other Fowl No.	Total Poultry No.
1	46,134	18,320	99,363	117,683	37,192	16,269	13,761	5,208	3,458	205,388	227,815
2	54,784	17,195	96,877	114,072	98,967	44,762	31,258	5,540	4,754	334,415	375,967
3	27,211	8,745	42,807	51,552	18,296	12,749	10,624	3,250	2,314	135,280	151,468
4	60,033	17,649	82,086	99,735	40,771	53,760	39,307	2,436	6,272	428,401	476,416
5	76,768	22,241	102,712	124,953	55,142	27,513	31,220	4,657	8,734	386,974	431,585
6	76,418	31,955	129,677	161,632	68,148	72,124	55,699	9,026	9,395	624,571	698,691
7	77,483	28,787	69,003	97,790	22,575	44,968	35,950	5,012	6,946	462,552	510,460
8	82,098	52,731	91,195	143,926	47,050	107,417	85,257	9,629	14,602	756,125	865,613
9	32,208	17,672	34,097	51,769	40,759	46,291	32,202	4,080	2,276	232,507	292,570
10	73,114	42,872	79,983	122,855	23,850	72,008	46,371	16,112	18,715	564,737	645,995
11	43,454	35,615	40,932	76,527	29,663	71,122	53,785	16,096	12,321	562,659	644,861
12	7,444	4,772	6,803	11,575	4,396	6,888	4,647	1,335	1,112	102,733	108,827
13	20,104	12,173	20,380	32,553	8,992	29,119	17,394	4,581	2,717	161,385	186,077
14	32,645	20,667	27,162	47,829	13,721	47,588	41,765	11,616	4,745	337,097	395,223
15	6,678	3,443	7,434	10,877	1,601	8,613	7,849	1,139	1,72	41,438	49,693
16	23,805	9,639	24,475	34,114	3,348	18,700	10,768	1,694	1,725	138,026	152,213
17	27	19	34	53	27	109	.....	.....	.....	232	232
Total...	740,408	344,495	955,000	1,299,495	515,000	680,000	517,857	100,461	99,258	5,496,130	6,213,706

CLASSIFICATION OF LIVESTOCK, ALBERTA, 1928

HORSES		CATTLE	
	No.		No.
Stallions	4,224	Bulls	35,947
Mares	338,432	Milch Cows	344,495
Geldings	327,074	Cows kept for beef	153,600
Colts, Fillies	70,678	Yearlings for milk	145,844
		Yearlings for beef	169,684
Total.....	740,408	Calves	343,791
		All other Cattle	106,134
		Total.....	1,299,495
SHEEP		SWINE	
	No.		No.
Sheep	328,527	Brood Sows	89,899
Lambs	186,473	Other Pigs	590,101
Total.....	515,000	Total.....	680,000

CLASSIFICATION OF POULTRY, ALBERTA, 1928

TURKEYS:		No.
Over 6 months	109,430	
Under 6 months	408,427	
		517,857
GEESE:		
Over 6 months	39,739	
Under 6 months	60,722	
		100,461
DUCKS:		
Over 6 months	37,514	
Under 6 months	61,744	
		99,258
OTHER FOWL:		
Over 6 months	2,829,352	
Under 6 months	2,666,778	
		5,496,130
Total.....		6,213,706

PUBLICATIONS AVAILABLE FOR DISTRIBUTION

**From the Office of the Editor of Publications, Department of Agriculture,
Parliament Buildings, Edmonton, Alta.**

Annual Report of Department of Agriculture.

Statistics of Progress, 1906-1928.

Alberta Book.

Map of Alberta.

Road Map and Peace River Guide.

The Peace River Country.

Calendar of Schools of Agriculture.

Soil Survey Sheets—Medicine Hat District.

Macleod District.

Sounding Creek District (University of Alberta).

Practical Irrigation in Alberta (Alberta Government).

The Plowing Match (Alberta Government).

Shall We Discard the Summerfallow? (Alberta Government).

Plows and Plowing (University of Alberta).

Binder and Knotter Troubles (University of Alberta).

Ropework on the Farm (University of Alberta).

Weeds Poisonous to Livestock (Alberta Government).

Alberta's Weed Problem (Alberta Government).

Soil Cultivation (Alberta Government).

Corn-growing for Boys and Girls (Alberta Government).

Tree-planting on the Prairie (Dominion Government).

Building up a Dairy Herd (Alberta Government).

Steer Feeding Problems (University of Alberta).

Sheep in Alberta (Alberta Government).

Sheep Production in Alberta (University of Alberta).

Housing of Swine (Alberta Government).

The Suckling Period (Alberta Government).

Problems in Bacon Hog Production (University of Alberta).

Report of Special Market Investigation Committee (Dominion Government)

Alberta Poultry Bulletin (Alberta Government).

Meat Curing on the Farm (Pork) (Alberta Government).

Control of Grasshoppers (Alberta Government).

Destruction of Gophers (Alberta Government).

Wheatstem Sawfly Menace (Alberta Government).

Wireworms of Alberta (University of Alberta).

The Army Cutworm of Southern Alberta (Alberta Government).

Bee-keeping in Canada (Dominion Government).

Wintering of Bees (Dominion Government).

Bee Diseases (Dominion Government).

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